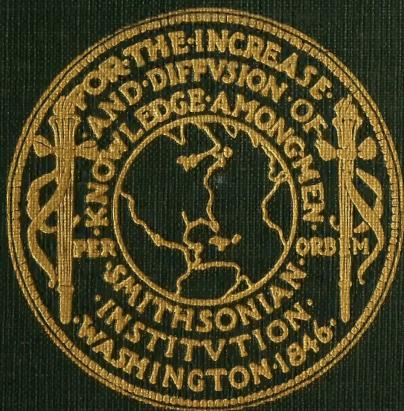
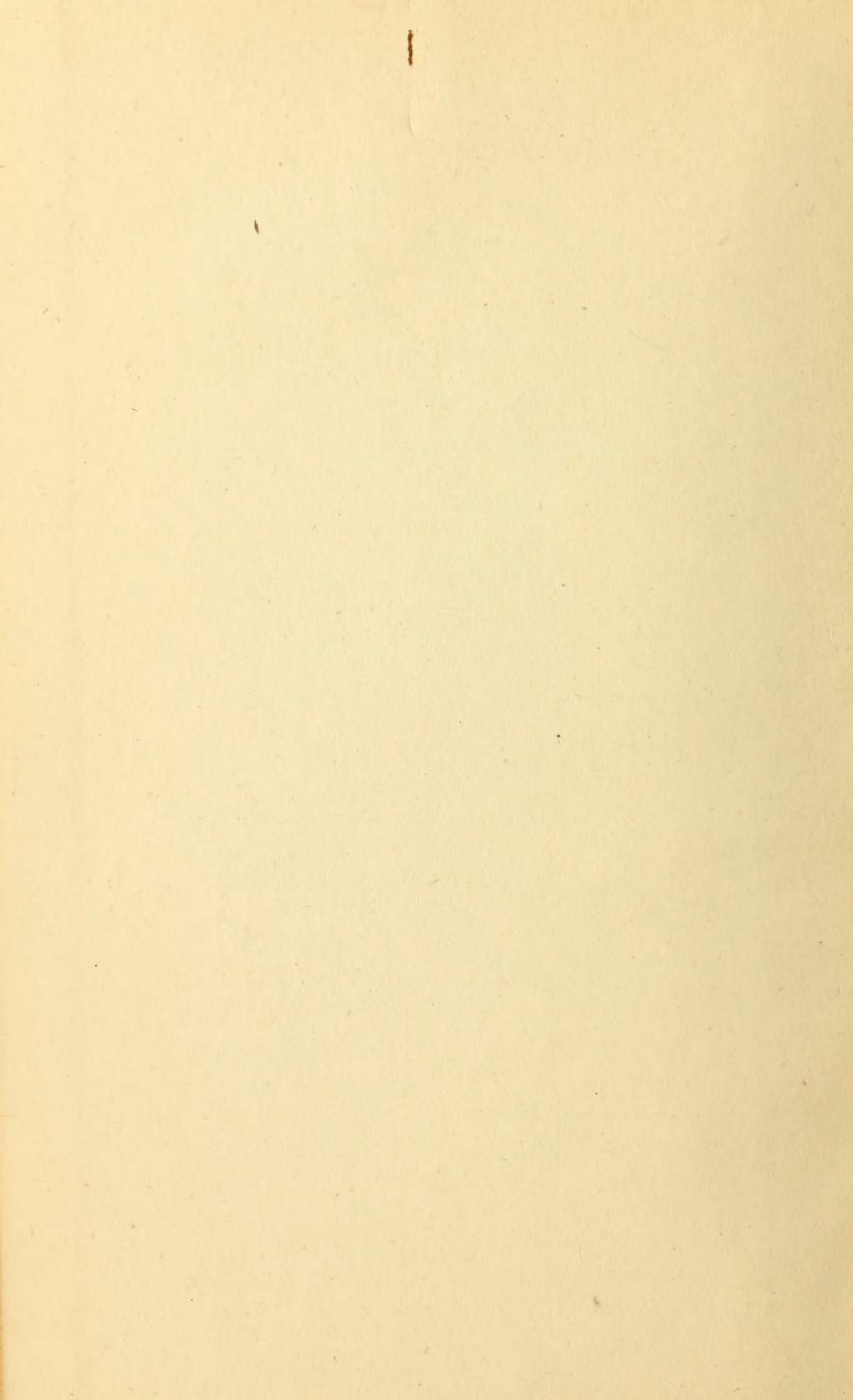


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SMITHSONIAN INSTITUTION
UNITED STATES NATIONAL MUSEUM

REPORT ON THE
PROGRESS AND CONDITION OF THE
UNITED STATES NATIONAL MUSEUM
FOR THE YEAR ENDED JUNE 30, 1947



UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1947

UNITED STATES NATIONAL MUSEUM
Smithsonian Institution

REPORT OF THE

UNITED STATES NATIONAL MUSEUM
Smithsonian Institution

UNITED STATES NATIONAL MUSEUM,
UNDER DIRECTION OF THE SMITHSONIAN INSTITUTION,
Washington, D. C., October 15, 1947.

SIR: I have the honor to submit herewith a report upon the present condition of the United States National Museum and upon the work accomplished in its various departments during the fiscal year ended June 30, 1947.

Very respectfully,

ALEXANDER WETMORE,
Director, U. S. National Museum.

The SECRETARY,
Smithsonian Institution.

REPORT ON THE PROGRESS AND CONDITION OF
THE UNITED STATES NATIONAL MUSEUM FOR
THE FISCAL YEAR ENDED JUNE 30, 1907.

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¹ The following statements carried formerly in the annual report of the National Museum have been transferred to the annual report of the Secretary of the Smithsonian Institution, in the interests of economy in printing cost and avoidance of duplication: Appropriations, Explorations and field work, Visitors, Photographic laboratory, Buildings and equipment.

beliefs of your own and has nothing to do with me, carry
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REPORT ON THE PROGRESS AND CONDITION OF THE UNITED STATES NATIONAL MUSEUM FOR THE FISCAL YEAR ENDED JUNE 30, 1947

By ALEXANDER WETMORE

*Secretary of the Smithsonian Institution, Director of the
United States National Museum*

INTRODUCTION

FROM the funds appropriated by Congress to carry on the operations of the Smithsonian Institution and its branches during the fiscal year 1946-47, a total of \$528,221 was allotted for the work of the United States National Museum, \$43,000 of which was for printing and binding. The specific item "Maintenance and Operation" carried in previous reports, providing for the maintenance, repair, operating, and guarding of buildings, no longer appears as a separate Museum allotment, inasmuch as the entire Smithsonian group of buildings is now serviced through one undivided fund. It should be noted, however, that although this item has been removed from the apportionment to the Museum, there has been no reduction in the Museum's funds.

As a whole the work of the National Museum moved forward very satisfactorily, as many activities interrupted by the war assumed a more normal course. The year saw some progress made in recouping losses in personnel suffered during the war years, and it was possible to fill several of the vacant positions at the curator, associate curator, and assistant curator levels. The building up of the staff must continue as increased funds become available, if the Museum is to keep abreast of the increasing curatorial and research work and provide all the informational services it is called upon to render the public.

The space problem continues to be the most serious one facing the Museum, and it is unlikely that there can be any change in this situation until new buildings are provided. As has been pointed out in former reports, the overcrowding of material, both in the exhibition and the study collections, has reached an impasse, aggravated by the fact that the accessions since the war are greatly increasing in numbers. The building needs of the Museum have been laid before Con-

gress, and it is hoped that the recommendations made may be included in the first public-building programs whenever these are initiated.

COLLECTIONS

It was to be expected that there would be a great influx of material to the National Museum following the end of the war, but in some divisions the increase has been even more than was anticipated. Three factors have been chiefly responsible for this: The resumption of field work by the Institution, including participation in such large-scale projects as the Navy's Operation Crossroads; the resumption of exchange and communication between the United States and foreign countries interrupted by the war; and return of more stable conditions in industry. An enlivened public interest in scientific matters may also have contributed. On account of the acute space problem in the Museum buildings, this increase of material would become actually an "embarrassment of riches" were it not for the fact that the material is mostly of such high importance in building up the national collections that it would be unthinkable to refuse it.

The accessions for the year came in 1,662 separate lots, with a total of 756,870 specimens (nearly double last year's number), distributed among the five departments as follows: Anthropology, 9,445; biology, 533,098; geology, 205,549; engineering and industries, 5,239; history, 3,539.

For examination and report 1,149 lots of specimens were received, the larger part of which was botanical and geological in character. Some of this material was returned to the senders, and some that is especially desirable was retained for the Museum's collections.

Gifts of duplicates to schools, museums, and other institutions numbered 4,357 specimens. Exchange of duplicate material with other collections amounted to 10,662 specimens, and 238 specimens were transferred to other governmental agencies. Loans for scientific study to investigators outside of Washington totaled 80,205 specimens.

The following summary of the collections has been adjusted to reflect additions to and eliminations from the various series to the end of the fiscal year:

Anthropology	736, 080
Biology	15, 190, 083
Geology	2, 950, 224
Engineering and industries	147, 274
History	538, 211
 Total	 19, 561, 872

A complete list (by donor) of all accessions received during the year is given later in this report (p. 69).

LIBRARY

The Museum library is a storehouse of literature embracing all subjects touched upon by the Museum's collections and research programs—broadly the subjects of museology, anthropology, geology, botany, zoology, history, engineering, crafts, and industries. This literature is gathered from all over the world and is written in many languages. The number of volumes on record in the library is 239,167, and there is a wealth of additional material, especially in the large files of pamphlets on special subjects maintained in the sectional libraries of the different divisions of the Museum.

Statistics of the library's growth show for the most part only minor changes from those of the preceding year. Purchases included 1,292 books and pamphlets and 160 periodical subscriptions; 4,711 of the publications received in exchange came in response to 317 special requests for numbers needed to fill gaps in periodical files or for new publications, chiefly serials.

Gifts, as usual, were numerous and came from many friends both within and outside the Museum. Paul E. Garber presented 147 important books and pamphlets on aeronautics from his own library. Dr. Ray S. Bassler's gift of about 1,500 pamphlets on geology will add greatly to the usefulness of the sectional library of the department of geology, and A. B. Gahan presented his collection of about the same number of pamphlets on Hymenoptera to the division of insects. George R. Goergens again enriched the collection of historic literature on photography by presenting 48 volumes on that subject. To these and all the other donors of the year the library is most grateful for their generosity.

The loan of 7,297 publications recorded at the loan desk of the main library represents only a fractional part of the number of books and periodicals actually used. No count is kept of the number of publications consulted in the library, or of the circulation within each division of the books and periodicals filed in the sectional libraries. During the past year 4,228 new accessions were assigned to the 31 sectional libraries for intramural circulation and filing. Interlibrary loans included 1,892 publications borrowed from other libraries, chiefly from the Library of Congress, the Department of Agriculture, the Army Medical Library, and the Geological Survey. A total of 1,241 publications were lent to other libraries.

The number of publications cataloged (4,195) shows an increase of 497 over the previous year, and there were no serious arrearages in the cataloging of current acquisitions. Again the services of a temporary cataloger for two months in the summer made it possible to recatalog some of the much-in-demand publications of the State geo-

logical surveys, many of which are still so incompletely represented in the catalog as to make them difficult to use.

The card duplicating machine purchased in December has already been of great assistance, relieving the catalogers of much clerical work in the typing and revision of secondary cards and shortening the time of getting cards for new acquisitions made and filed in the catalog.

The ever-mounting cost of binding limited the number of volumes sent to the bindery to 616, and about 1,000 were added to the large existing backlog of volumes needing binding or rebinding. There were 1,021 books repaired in the library, but this figure too presents only a small part of the number of books and periodicals needing such attention.

The most serious handicap to good service in the Museum library continues to be the deplorable overcrowding of the shelves which is everywhere apparent. The correct shelving of a new book has become a time-consuming matter of contrivance, shifting, and rearrangement, rather than a quickly accomplished routine task, and the immediate location of books in some of the classes that have had to be double-shelved or transferred en bloc to less accessible parts of the stacks has become exasperatingly difficult. Not the least serious feature of the whole situation is the abnormally rapid physical deterioration of the books, some of which are irreplaceable.

Summarized statistics

Accessions of cataloged volumes.....	2,851
Volumes, pamphlets, and maps cataloged or recataloged.....	4,195
Cards added to catalogs and shelf-lists.....	17,510
Periodical parts entered.....	8,093
New exchanges arranged.....	158
Volumes sent to the bindery.....	616
Volumes repaired in the library.....	1,057
Circulations of books and periodicals, main library.....	7,297
Publications assigned to sectional libraries for intradivisional circulation and filing.....	4,228

PUBLICATIONS AND PRINTING

The allotment to the National Museum for its publication requirements for the year 1946-47 was \$43,000, the same as for the previous year. An apportionment of \$34,000 was made for printing Bulletins, Proceedings, and the Annual Report; \$5,000 for binding; \$4,000 for the salary of the Museum printer. One Annual Report, 3 Bulletins, 2 Contributions from the National Herbarium, and 8 Proceedings papers were published—14 publications in all. A list of these will be found on page 108. Because of a sharp increase in the cost of binding only 616 volumes were bound, 154 less than during the previous year.

The distribution of volumes and separates to libraries and individuals on the regular mailing lists aggregated 26,716, while in addition 8,236 copies of publications issued during this and previous years were supplied in response to special requests. The mailing lists have been carefully revised to avoid loss in distribution.

The editor, Paul H. Oehser, in addition to his regular editorial duties, continued as chairman of the Efficiency Rating Committee of the Smithsonian Institution, and as president of the Smithsonian Employees Federal Credit Union. Early in the year he served on a committee to arrange a special exhibit in connection with the Smithsonian Centennial celebration. He also represented the Institution on the American Documentation Institute.

Indexing.—Indexes to most of the Museum publications are prepared in the Editorial Division, and this work was kept current. Mrs. Marguerite W. Poole, information clerk, indexed Bulletin 191 and continued work on the large general index of Museum publications, and Mrs. Phyllis W. Prescott indexed Proceedings papers. Miss Gladys O. Visel, editorial clerk, completed the classified index to Bulletin 193, which is a complete list of National Museum publications, 1875-1946. This was in page proof at the end of the year. Services of a full-time indexer are badly needed in the Division.

Museum print shop.—The Government Printing Office, as in former years, detailed Frank W. Bright to print Museum and herbarium labels and special forms at the Museum print shop, a Government Printing Office branch located in the southwest corner of the Arts and Industries Building. Requisitions submitted during the year totaled 147, all but 18 of which were completed. Also completed were 23 requisitions submitted during the previous fiscal year, the total finished during the year being 170. Seven of the unfilled requisitions were submitted too late in the year for completion, and the remaining 11 covered large exhibition labels or specimen labels that will involve much hand-setting of type or long press runs.

MEETINGS AND SPECIAL EXHIBITS

The Smithsonian continued to make available the auditorium and lecture room of the Natural History Building to educational, scientific, welfare, and governmental organizations and groups for meetings and lectures. During the past year 275 groups availed themselves of this opportunity.

The foyer and adjacent space in the Natural History Building customarily used for special exhibits were, with the exception of February 3 through 28, in constant use. During this period the monks' cloth covering on all alcoves was removed and new monks' cloth installed. The special exhibits were:

July 1 to September 27, 1946. Special exhibition in celebration of the 100th anniversary of the founding of the Smithsonian Institution.

July 22 to 31, 1946: Exhibition of models of automobiles submitted by contestants under the auspices of the Fisher Body Craftsmen's Guild.

September 28 to 29, 1946: Exhibition of roses and flower arrangements under the auspices of the Potomac Rose Society. The first annual exhibition since 1941.

October 1 to 31, 1946: Exhibition of oil and water-color paintings held under the auspices of the Society of Washington Artists.

November 1 to 30, 1946: Exhibition of oil and water-color paintings and sculpture held as the Ninth National Metropolitan State Art Exhibit.

December 1 to 31, 1946: Exhibition of photographs under the auspices of the National Photographic Society.

January 1 to February 2, 1947: Exhibition of dioramas, photographs, and equipment showing the achievements of medicine during World War II, held by the Surgeon General's Office of the War Department.

March 1 to 31, 1947: Exhibition of water-color paintings under the auspices of the Washington Water Color Club, in eight alcoves.

March 1 to 31, 1947: Exhibition of miniature paintings, sculpture, and engraving under the auspices of the Society of Miniature Painters, Sculptors and Gravers, in two alcoves.

April 1 to 30, 1947: Exhibition of oil paintings and sculpture by Hugo Almaraz, under the auspices of the Pan American Union, in two alcoves.

April 1 to 30, 1947: Exhibition by means of photographs, showing poor living conditions in sections of Washington, D. C., held under the auspices of the Citizens Council for Community Planning, in eight alcoves.

May 1 to 31, 1947: Exhibition of photographs under the auspices of the Potomac Appalachian Trail Club.

June 1 to 30, 1947: Exhibition of Hawaiian flower paintings, by Maurice Kidgell, sponsored by Delegate and Mrs. Farrington of Hawaii, in two alcoves.

June 1 to 30, 1947: Exhibition of ship models held under the auspices of the Washington Ship Model Society, in eight alcoves.

On the evening of October 23, 1946, the ground and first floors of the Natural History Building were open from 8 to 11:30 p. m. in connection with Smithsonian Centennial observance. Convocation exercises were held in the auditorium beginning at 8 p. m., followed by a reception in the rotunda, first floor, attended by 1,021 guests. Music was furnished by the Marine Band Orchestra, and light refreshments were served.

DETAILED REPORTS ON THE COLLECTIONS

DEPARTMENT OF ANTHROPOLOGY

(FRANK M. SETZLER, *Head Curator*)

IT WAS possible during the year for members of the staff to resume anthropological field researches, most of which had been suspended during the war years. As a result of private donations and the transfer of funds from other Government agencies, the research programs in archeology, ethnology, and physical anthropology were again carried forward.

A contribution from Ernest N. May enabled H. W. Krieger, curator of ethnology, to renew a program of ethnohistorical research in the West Indies. This year's investigations led to the identification of the fifteenth-century Indian villages described by Christopher Columbus on his first voyage of discovery in the New World. On the basis of the material recovered from these sites it may be possible to identify the historical aboriginal culture existing on the Bahama Islands, Cuba, Haiti, and the Dominican Republic. If funds permit, the program calls for similar surveys covering the other landings made by Columbus during his other voyages.

In connection with the program of the Department of State for the promotion of cultural relations with scientists in the other American countries, Dr. T. Dale Stewart, curator of physical anthropology, inaugurated a program of research which had been contemplated in 1943. In cooperation with anthropologists of the Carnegie Institution of Washington and scientists from Guatemala, Dr. Stewart measured 198 Indians of the Cakchiquel linguistic group as well as a few Quichés and Zutuhils in the highlands of Guatemala. These anthropological studies should make possible a comparison of the Highland Maya of Guatemala with the Lowland Maya of Yucatán.

During the summer and fall of 1946, Dr. Waldo R. Wedel, associate curator of archeology, was detailed to the River Basin Surveys for work in the Missouri River Basin. On May 20, 1947, he left Washington again, to continue this detail. Joseph R. Caldwell, scientific aide in the division of archeology, was detailed to the River Basin Surveys from November 12, 1946, to April 1, 1947, for work at the Allatoona Reservoir in northern Georgia.

Several members of the staff attended important anthropological conferences as delegates of the United States in Mexico and the Republic of Honduras.

On October 1, 1946, Dr. Walter W. Taylor, Jr., was appointed collaborator.

As in previous years, much time and effort were devoted to the reduction of the rapidly accumulating backlog of uncataloged specimens and to plans for the modernization of the anthropological exhibits.

ACCESSIONS

The department received during the year 74 accessions totaling 2,770 specimens. In addition, 6,676 specimens were added to the accessions of previous years, representing backlog work in the division of archeology, making a grand total of 9,445 specimens processed during the year. This represents an increase of 419 specimens over the previous year.

The 74 accessions were assigned to the divisions and sections as follows: Archeology, 24 (2,207 current and 6,676 backlog, total 8,883); ethnology, 28 (401 specimens); ceramics, 4 (79 specimens); musical instruments, 1 (1 specimen); period art and textiles, 4 (10 specimens); physical anthropology, 12 (71 specimens); 1 accession for special exhibition.

Archeology.—The following accessions are regarded most worthy of mention: 99 specimens from Adak Island, in the Aleutians, presented by Sheldon S. Judson; 1,363 archeological items from Montgomery County, Md., collected and presented by Richard E. Stearns; 223 stone implements and potsherds from Selden Island, Montgomery County, Md., collected and donated by Richard G. Slattery; a tripod bowl from a ruin near Oaxaca, Mexico, received as a gift from Gustave Bellon; 2 earthenware bowls from the Taino Indian village site of La Caleta, Province of Trujillo, Dominican Republic, donated by Col. Charles Leroy Youmans; a bar amulet of Ohio type found on the shore of Chesapeake Bay, St. Marys County, Md., presented by Lloyd D. Yates; 2 Roman or Franko vessels from Speicher, Germany, a gift from Col. Robert Davis, U. S. A. (retired); and 14 stone implements and fragments from Larimer County, Colo., collected in 1937 and donated by the late Lt. Charles R. Scoggin.

On June 30, 1946, the division of archeology was credited with 494,809 specimens. Of this total 352 cataloged specimens were presented to educational institutions and 35 cataloged artifacts were sent out in exchange. Receipts for the year total 8,883. The total number of specimens in the division on June 30, 1947, is therefore 503,305, a gain for the year of 8,496.

Ethnology.—This year's accessions of ethnological materials included collections from the North American tribes of Alaska and the Aleutian Islands, Eastern Woodlands, Great Plains, and Southwest; from the Indian tribes of Mexico, Panama, Venezuela, Colombia, Bolivia, and Brazil; from the Oceanian peoples of Hawaii and New Guinea; from the aboriginal tribes of Australia; from the Indonesians of Java, Sumatra, and Bali; from the Asiatic peoples of India and the Outer Mongolian Peoples Republic; and from the African tribes of the Belgian Congo and neighboring portions of West Africa.

An outstanding major collection was received by bequest of the late Princess Abigail W. Kawanakanakoa, of Honolulu, comprising a well-documented group of masterpieces of Hawaiian handicrafts. These specimens included four colorful shoulder capes fashioned of small feathers of the *oo* and *iiwi* birds tied to a base netting of native hemp fiber, three large wooden poi bowls hand-carved with simple stone tools, a handsome *pawehe niihau* mat, and a large tapa cloth. These objects had been transmitted from generation to generation in the Hawaiian royal family. King David Kalakaua, seventh king of Hawaii, is known to have owned and used a number of them. Others were once the property of Hawaiians of royal blood in earlier times.

By transfer from the Library of Congress, the division received a collection of 37 ethnological specimens obtained half a century ago by the late Mrs. French Sheldon, pioneer woman explorer of Central Africa, from the tribes of the Belgian Congo and neighboring areas of West Africa. The collection comprises examples of the skilled, conventionalized woodcarving of the Congo tribes of the type that has influenced modern sculpture strongly; also ivory carvings, brass castings, metal knives, and elaborate ceremonial masks.

Two remarkable collections from the Indian tribes of South America were among the year's accessions. The Reverend Willard R. Elton, for six years a missionary among the Nhambiquara Indians of western Brazil, presented 30 specimens of clothing and ornaments, weapons, musical instruments, simple tools, and utensils of the types still in use among the unacculturated Nhambiquara. A collection of 65 ethnological specimens, obtained from the tribes of the Río Vaupes in Colombia and Brazil by Paul H. Allen, was received by transfer from the Bureau of American Ethnology. It includes a series of brilliant feathered ceremonial headdresses and other articles of clothing, primitive musical instruments, weapons, and baskets used by the Kubeo Indians and neighboring tribesmen.

The Lt. Col. D. H. Brotherton collection, presented by his sister-in-law, Mrs. Thomas T. Brown, is of special historical significance. The majority of the 83 specimens included were obtained from the Indians of the Hunkpapa Dakota camp of Sitting Bull when that famous chief

and his warriors surrendered to the then Maj. D. H. Brotherton, commanding officer of Fort Buford, on their return from Canada, July 19, 1881. In this collection are many excellent examples of Sioux Indian beadwork and quillwork employed in the decoration of articles of clothing, containers, and riding gear, representing some of the best work of the Plains tribes of the period circa 1880. Included also are weapons and smoking equipment and a remarkable bear headdress.

Valuable additions came to the division's extensive collection of original drawings and paintings of North American Indians and Indian life in the days before the development of the camera. A unique gift of great value was made by Miss Helen Barlow, of London, England, in the form of an oil portrait of five Indian chiefs painted by the American artist, Charles Bird King, on the occasion of the visit of the chiefs to Washington, D. C., in 1821. This painting, entitled "Young Omawhaw, War Eagle, Little Missouri and Pawnees," is one of the earliest of King's Indian portraits and is probably the earliest oil painting to show the physical appearance of the Omaha, Osage, and Pawnee Indians. Through the generosity of Dr. Elizabeth Sohon the division received a gift of 25 original field sketches in pencil and pen and ink by the donor's father, Gustavus Sohon, which were drawn in the Northwest while the artist was a member of two Government exploring expeditions between 1853 and 1862. The drawings include scenes at important Indian treaty councils in 1855, views of early Indian missions and trading posts, and scenes in the daily life of the tribes of the Plateau. Among the specimens in the Lt. Col. D. H. Brotherton collection were nine original water-color paintings by H. Stieffel, a private soldier of the 5th U. S. Infantry, depicting scenes at the Medicine Lodge Treaty with the Southern Plains tribes in 1867, and panoramic views of important Army posts on the Indian frontier in the 1860's. These are primary source materials of historical as well as ethnological value. Twelve attractive oil portraits of Shoshoni, Blackfoot, and Flathead Indians of Montana, painted by Tom James Moore within the past decade, were received as a gift from the artist.

One of the most outstanding accessions of cultural objects received during the past 25 years was the gift by an anonymous donor of a valuable collection of American historical Staffordshire china. This important collection consists of 71 specimens by Enoch Wood and Thomas Mayer. It includes valuable pieces on which are depicted views of historical scenes, American colleges, historic sites and local landmarks, scenic wonders, and coats-of-arms of ten of the original thirteen States. The collection was assembled over a period of years in connection with a detailed study of historical Staffordshire ware. Another interesting ceramic specimen accessioned during the year is

a pressed-glass water tumbler with cabbage rose design, manufactured by the Central Glass Co., Wheeling, W. Va., prior to 1865, and presented by Mrs. Laura B. James.

Miss Mary E. Maxwell added to her extensive collection of European and Oriental antique watches and jewelry through the gift of four specimens, including a rare Indian enameled bracelet studded with sapphires, diamonds, and rubies, and a black onyx locket with floral pattern of diamonds brought from Scotland to the United States before 1770.

An antique early nineteenth century corno de basseto or alto clarinet, of boxwood and ivory, was presented by Mrs. June M. Holderer (deceased) through her husband, George B. Holderer.

On June 30, 1947, the records of the division listed a total of 183,584 ethnological specimens; 7,733 specimens in the section of ceramics; 2,415 specimens in the section of musical instruments; and 2,452 specimens in the section of period art and textiles.

Physical anthropology.—The most unusual accession in physical anthropology consisted of unpublished anthropometric and other data collected by German anthropologists in Poland during World War II, together with some of their anthropological measuring instruments. The data had been assembled for the "Institut für Deutsche Ostarbeit" and was transferred to the Museum as a permanent loan by the Intelligence Division of the War Department General Staff. Full measurements and observations, photographs (5 views), personal, medical, and family histories of each subject are included. Hair samples, finger prints, and head and nose contour tracings of many of these subjects are available. Measurements and indices of adults were seriated and statistical constants calculated by the Institut.

Another accession deserving mention is a series of 25 specimens from Indian mounds in Calhoun County, Ill., representing a fourth addition to Dr. P. F. Titterington's gift of skeletal material from Illinois mentioned in previous reports.

On June 30, 1946, the division of physical anthropology was credited with 37,771 specimens. Of these, 1,251 specimens (animal, bird, and reptile brains) were transferred to the department of biology. Specimens received during the year totaled 71. The total number of specimens in the division on June 30, 1947, is therefore 36,591.

Distribution and exchange of specimens.—In the division of archeology gifts to other institutions totaled 1,018 specimens, of which 666 were uncataloged, leaving 352 to be deducted from the divisional total. Seventy-two miscellaneous North American artifacts (37 of them uncataloged) were sent out in exchange. The division of ethnology distributed 45 cataloged specimens. One lot of 11 specimens, on loan to the Museum since 1917, was withdrawn by its owner. Six lots

of material were distributed as gifts to other organizations. Eight lots totaling 312 specimens were lent to other divisions and to other institutions.

Number of specimens under the department.—On June 30, 1947, the department of anthropology officially listed a total of 736,080 cataloged specimens. During the year 9,445 specimens were added to the collections, while 1,683 cataloged specimens were distributed as gifts to other institutions and transferred to other departments of the Museum. The total number of specimens in the department therefore represents a net increase of 7,762. The summary below shows the assignment of specimens to the various divisions and sections within the department:

Archeology	503, 305
Ethnology	183, 584
Ceramics	7, 733
Musical instruments	2, 415
Period art and textiles	2, 452
Physical anthropology	36, 591
Total	736, 080

INSTALLATION AND PRESERVATION OF COLLECTIONS

Because of the perishable nature of the many thousands of specimens in anthropology, as well as the lack of adequate space for the proper housing of them, the scientists, preparators, and aides are required to give a great amount of attention to the preservation of these collections. Moreover, the responsibility continues to increase each year, owing to constant additions. Many specimens on exhibit must be changed regularly because of the deteriorating effect of sunlight on articles made by primitive peoples.

Archeology.—In the east range, partly given over to the ethnological material removed from the fourth floor during the war years, 14 exhibit cases were restored to their former positions, and, in consequence of this change, materials displayed in those and 22 other cases required rearrangement. A collection of Phoenician glass, which had been evacuated during the war, was again placed on exhibition. The division takes pride in the fact that of 93 exceedingly fragile, ancient glass vessels, not one was broken during removal for safekeeping early in the war and return a year ago.

A series of stone tools, iron ore, and ocher from the aboriginal hematite mines at Leslie, Mo., accessioned May 5, 1903, but not marked at the time, were individually numbered. Associate Curator Wedel prepared for accessioning four lesser collections of archeological material from Virginia and Maryland, received some time ago.

Members of the staff gave much thought during the year to the storage problem. In the one small corner of the fourth floor assigned to archeology, racks were rearranged and the floor area there is now utilized as fully as possible. But no space is available for 2,036 cubic feet of cataloged and uncataloged material now stacked in offices and corridors.

Ethnology.—The assistant curator, Robert A. Elder, Jr., continued to devote most of his time to the consolidation of the study collections by culture areas. The maximum use of allotted space has now been attained. The passageways between the cases in the attic can be narrowed not one additional inch, since they are now the exact width of unit trays. During the year lighting fixtures and switches were relocated to conform to this arrangement, which allows for the greatest number of cases with minimum width of aisles. The proposed modernization of exhibit hall number 11 will provide 5,888 cubic feet of storage space above the exhibition units when that project is realized. A large portion of this storage space, however, must be used to house the specimens now on exhibition.

As a regular routine in the care and preservation of museum specimens, all incoming accessions were fumigated, cleaned, and repaired. Fifty original oil paintings of Indian subjects by George Catlin were cleaned and revarnished by Andreas J. Andrews, of the anthropological laboratory. This treatment adds greatly to the appearance of these valuable century-old paintings. The Museum's fumatorium has been used when necessary for the treatment of infected lots of specimens accessioned in previous years. Thus, costumed lay figures of the St. Lawrence Island Eskimo group were fumigated in this manner, as was also an early American piano.

Physical anthropology.—Before much more can be done in the way of reorganizing the collections, additional storage space will have to be provided. The point has been reached where new accessions must be placed in odd corners or in front of older collections. This condition could be relieved in part by the installation of steel racks in some of the present storage spaces. Without these it is necessary to remove a column of drawers 18 feet high each time it is necessary to examine the skeletal collections in the bottom drawer.

Anthropological laboratory.—The anthropological laboratory performed a wide variety of tasks: For the division of archeology 2 duplicate casts of a small Indian carved head and the impressions of 3 Indian pottery markers were made. An antique vase and a stone tube were restored, and 2 pieces of Mexican sculpture were repaired and restored. The sacrificial stone from Mexico was repaired, and the painted design on a pottery vessel was renewed. For the division of ethnology 3 large wooden bowls from Hawaii were

treated with preservative, a large picture frame was gilded and waxed, a portrait of King David Kalakaua of Hawaii was matted, and a form made for the large Hawaiian feather war-cloak worn by King Kamehameha III. A porcelain elephant, French fan, Zuñi mask, Eskimo spoon, the exterior of a piano, porcelain relief plaque, an American vase, fragment from an altar, a cut-glass bowl, and other miscellaneous objects were repaired. The New Zealand Maori man exhibit, the Negrito family group, and the Capt. John Smith group were repaired. For the division of physical anthropology 17 busts of a series of aborigines were repaired, painted, and waxed and 19 Indian facial casts were made from piece molds. Intracranial casts of a chimpanzee and gibbon were made. As has been customary in previous years, the statuary throughout the Natural History Building was kept in repair.

Cataloging.—In the department of anthropology no specimen is considered cataloged until it has been classified, listed, carded, entered in the divisional catalog book, and the catalog number inked or painted on the specimen. The greatest backlog in the division of archeology is the placing of a 6-digit catalog number on individual specimens. Some progress was made in reducing the backlog, but many years will be required to process the 60,000 specimens on hand at the close of the present fiscal year. The most pressing need, especially in the division of archeology, is for the services of more human hands.

Extensive additional documentation of the Cherokee Indian materials collected by James Mooney half a century ago and now included in several Museum exhibits has been added to the catalog cards from Mooney's original manuscript notes describing the specimens. Studies of the reports of the National Institute, which preceded the establishment of the Smithsonian Institution in 1846, have resulted in the identification of some specimens now in the Smithsonian, but formerly in the collections of the National Institute. Through the cooperation of the National Archives, the service records of Army officers who made some of the early Plains Indian collections now in the division of ethnology have been obtained, furnishing additional documentation and more exact dating of their collections. In the division of physical anthropology considerable time and effort will be required of the scientific staff to sort over the large amount of material in the Belle Glade, Fla., collection, which mainly represents the backlog. This will have to be done before the material can be listed for cataloging.

INVESTIGATION AND RESEARCH

In addition to carrying forward the routine Museum work, a considerable number of manuscripts summarizing the results of scientific

investigations were submitted for publication by the professional staff. In addition to carrying on his archeological surveys in the Missouri Valley, Dr. Wedel prepared several papers dealing with the prehistoric Indian cultures of the Plains area as well as summaries of the Missouri River Basin Surveys. J. R. Caldwell published some of the results of his field work along the Allatoona River, Ga. As time permitted, N. M. Judd continued his archeological researches on the results of explorations at Pueblo Bonito, N. Mex.

In the division of ethnology, the curator, H. W. Krieger, was occupied with the study of Indian and historic cultures of the Caribbean area. He prepared for publication by the Department of State a report on the First International Conference of Archeologists of the Caribbean, held at Tegucigalpa, Honduras, August 1 to 11, 1946, which he attended as the delegate of the Smithsonian Institution. He also studied early Spanish records, particularly the *Journal of Christopher Columbus*, pertaining to the First Voyage and to the Spanish settlements at La Navidad, on the north coast of Haiti, and La Isabela, on the north coast of the Dominican Republic. He continued his study of the collections made on previous Smithsonian expeditions during the years 1928-1938 to Cuba, Hispaniola, the Bahamas, and the Virgin Islands. Progress was made in the preparation of a final report on Caribbean cultures based on the results of these expeditions.

The associate curator of ethnology, John C. Ewers, carried forward his research on the history, material culture, arts, and crafts of the Indian tribes of the Northwestern Plains. This study is based on information obtained from elderly Indian informants over a period of 3½ years of field research, which was interrupted by Mr. Ewers' military service. One short article, "Identification and History of the Small Robes Band of the Piegan Indians," based upon a portion of this material, was prepared during the year. Mr. Ewers also inaugurated a survey on the Plains Indian materials in the collections. These consist of about 7,000 specimens. Many of the specimens are of particular significance because of the relatively early dates they were obtained by Government exploring expeditions and Army officers stationed on the military frontier during the Plains Indian wars. Mr. Ewers also began the preparation of an illustrated article on the drawings made by Gustavus Sohon between 1853 and 1862 of Indians and Indian life of the Northwestern Plateau region. The study was based upon a remarkable collection of portraits of Flathead and Pend d'Oreille chiefs which has been a part of the division's collections for more than 60 years, and also on additional original drawings by the same artist which were given to the division during the past year by Dr. Elizabeth Sohon, the artist's daughter.

The curator of physical anthropology, Dr. T. Dale Stewart, spent considerable time on his report dealing with the excavations made during 1938-40 at the historic Indian village site located on Potomac Creek in Virginia. He also undertook, at the request of the Wistar Institute of Philadelphia, a revision of the late Dr. Aleš Hrdlička's book "Practical Anthropometry." At the close of the year he had finished the latter project and was preparing to take up again the Potomac Creek report. The associate curator, Dr. Marshall T. Newman, completed two of the three projects listed in the previous year's report, namely, the revision of the manuscript dealing with his work in Peru during 1941-42, and the manuscript prepared in collaboration with Lt. Comdr. R. L. Eng concerning the physical status of Okinawans in 1945. The latter appeared at the end of the year, whereas the former was still in galley proof. At the close of the year Dr. Newman was working on his third report, dealing with the skeletal remains collected in Pickwick, Wheeler, and Gunthersville Basins under the Tennessee Valley Authority in 1937-40.

During the year 81 lots of specimens were received in the department for identification. All were subsequently returned to the senders with an accompanying detailed report. This represents an increase of 14 lots, but totaling many more specimens than during the previous year. Of the 13 lots of specimens sent to the division of physical anthropology, all but one came from the Federal Bureau of Investigation; in the division of ethnology all but one out of the 38 written reports dealt with the identification of such cultural-history subjects as ceramics, textiles, glass, silver, and pewter.

DEPARTMENT OF BIOLOGY

(WALDO L. SCHMITT, *Head Curator*).

For the department of biology as a whole there was a notable increase in the year's activities. Although the number of accessions was slightly less than last year's total, the number of specimens or lots of specimens involved was 66 percent greater—533,088 specimens in 1947 as compared with 320,037 in 1946. Despite this great increase, which added materially to the work of caring for this part of the national collections, commendable progress was made by the staff generally in the preparation of papers for publication, published papers, and in aid rendered outside investigators in the way of information and specimens. Of the 283 papers published during the year, based wholly or in part on Museum material, 55 were either wholly by members of the staff or jointly with others, 28 by entomologists in the Division of Insect Identification, Bureau of Entomology and Plant Quarantine, working in the Museum, and 200 by others, aided in one way or another by the staff of the department.

The division of birds enjoyed one of its most satisfactory years, receiving for the first time in its existence large adequately documented collections from the Indian subregion. In this division the year was notable also for the actual beginning of the merging of the Fish and Wildlife Service's collection with that of the Museum, for the complete rearrangement of the collection of bird skeletons, and for the satisfactory progress that was made with all research projects. More systematic work has emerged from the division of fishes during the past few years than from any other fisheries institution in the Americas. In the division of insects the urgent demands heretofore made by the Army and Navy decreased, but there was an increase in the number of requests for material and information from men who are now out of the service and back at normal work. There was an increase of nearly 550 percent in the number of specimens accessioned by the division of marine invertebrates, together with an increase in the number of requests for information, including the determination of specimens, and for the first time in four years all available staff positions were filled. By concentrating on the identification of specimens, it was possible in the division of mollusks to make greater inroads on the backlog of undetermined material than in previous years. Work in the division of plants also progressed satisfactorily, although there was

little opportunity for original investigation. The offices formerly occupied by the American Association for the Advancement of Science in the Smithsonian Building were turned over to the division, releasing much-needed additional office and laboratory space and a large room under the sectional library for housing the collection of lower cryptogams.

Members of the staff participated in several important expeditions. Foremost among these was Operation Crossroads under the auspices of the United States Navy to the northern Marshall Islands and Bikini Atoll. Taking part in the biological investigations of this project as representatives of the Smithsonian Institution were Dr. Leonard P. Schultz, curator of fishes, and Dr. J. P. E. Morrison, associate curator of mollusks. As ichthyologists Dr. Schultz and Capt. Earl S. Herald, assigned to this work by the Army, were especially concerned with the relative abundance of fishes on reefs and in the tidal zone before and after the experimental atomic bombs were dropped. They preserved more than 38,000 specimens of fishes for study and for the national collections. Dr. Morrison gave his attention to both the vertebrate and the invertebrate animal life of the area and obtained specimens and data concerning the arboreal, terrestrial, and intertidal animal communities and populations. The series of birds he obtained from Bikini and the collections of mollusks from Bikini and the Marshalls was particularly complete.

Dr. Robert R. Miller, associate curator of fishes, continued the survey of the fishery resources of Guatemala begun last year under the joint auspices of the Guatemalan Government, the United States Fish and Wildlife Service, and the Smithsonian Institution, and spent 10 weeks in Guatemala. C. V. Morton, associate curator of plants, under a grant from Ernest N. May, of Wilmington, Del., made a 12-week botanical survey of St. Vincent, British West Indies. He obtained 4,800 specimens for the herbarium as a basis of his study of the flowering plants and ferns of the island.

The W. L. Abbott fund financed three field parties: M. A. Carriker, Jr., continuing ornithological field work in Colombia, with more than 1,750 birds collected; Sálim Ali, collecting birds in Gujarat and other areas in India; and Dr. A. Wetmore and W. M. Perrygo, making a short trip to the interior of Darién, Panama, and returning with 453 bird skins. The Smithsonian-Yale University Expedition to India under S. Dillon Ripley spent 6 months in India and Nepal and collected about 1,500 birds.

Several changes of personnel occurred in the department during the year: In the division of marine invertebrates Dr. Fenner A. Chace was appointed curator and Paul L. Illg was appointed associate curator and Frederick M. Bayer assistant curator. In the division of mol-

lusks Dr. Harald A. Rehder was advanced to curator and Dr. Joseph P. E. Morrison to associate curator, while R. Tucker Abbott was appointed assistant curator. The division of mammals lost through retirement H. Harold Shamel, scientific aide, and by transfer to another Government department Raymond H. Gilmore, associate curator. An addition to the division of fishes was Donald S. Erdman, scientific aide. Jason R. Swallen was transferred from the Department of Agriculture to the position of associate curator in the division of plants, and Mrs. Mabel P. Hollister, clerk-stenographer in that division, retired after 17 years of service. The honorary appointment of Mrs. Agnes Chase as research associate in the division of plants was also made during the current year. The honorary staff lost through death Maj. Edward A. Goldman, an associate in zoology since August 1, 1943, and one of the leading mammalogists of the country.

ACCESSIONS

The number of accessions for the year was 1,129. Although the total falls short of that for last year, the number of specimens was 66 percent greater, the department having received 533,098 specimens as compared with 320,037 for the year before, a numerical increase of 213,061. To these totals the several divisions and certain special sections contributed: Mammals, 54 accessions, 1,414 specimens; birds, 78 accessions, 7,117 specimens; reptiles and amphibians, 40 accessions, 834 specimens; fishes, 57 accessions, 80,173 specimens; insects, 239 accessions, 117,915 specimens; marine invertebrates, 131 accessions, 35,814 specimens; mollusks, 159 accessions, 245,746 specimens (including helminths, 11 accessions, 121 accessions, and corals, 4 accessions, 35 specimens); echinoderms, 18 accessions, 351 specimens; plants, 353 accessions, 43,734 specimens (including diatoms, 6 accessions, 39 crude samples).

During the war years emphasis was placed on investigations connected with sanitation and diseases affecting the armed forces, special attention being given to the study of the carriers and the reservoir hosts of various human ills. As a result, the collection of mammals, reptiles, and insects was particularly stressed. With the return of the armed forces and the demobilization of the sanitary and medical research units which accompanied them, there was a great drop in the receipt of land vertebrates and insects. This year perhaps one of the most important of the federally sponsored scientific and military projects was Operation Crossroads, in which biological investigations played a very important part. The great increases recorded in fishes, mollusks, echinoderms, and marine invertebrates partly resulted from the collections made during the study of the animal life of Bikini and other Marshall Islands before and after the dropping of the experimental atomic bombs. The increase in the division of plants was better than anticipated.

Mammals.—The most important accession of the year consisted of 602 glass slides of sectioned hairs presented by Dr. Ned Dearborn. This collection is the result of many years of painstaking effort on the part of the collector. It furnishes the division with exceptional facilities for the identification and comparative study of mammalian hair. Four important accessions, which included 160 specimens from Egypt prepared by Ensign P. Quentin Tomich in connection with the work of the Naval Medical Research Unit No. 3 and a series of 22 rodents sent from Kuwait, at the head of the Persian Gulf, by Mrs. Violet Dickson, brought the division its first adequate representation of some of the small mammals of the Middle Eastern area. Through the active interest of Olaus J. Murie seven pronghorn antelopes were procured in Wyoming for use in the preparation of an exhibit illustrating this unique North American mammal.

Birds.—The W. L. Abbott fund made possible four important accessions: 1,758 skins and 10 skeletons of birds from Colombia, collected by M. A. Carriker, Jr., including many forms new to science and the Museum; 453 bird skins, 2 alcoholic birds, 7 skeletons, 2 nests, and 2 sets of eggs from Panama, collected by Dr. A. Wetmore and W. M. Perrygo; and 556 birds from India, collected by Sálim Ali, including many forms new to the Museum and filling many gaps in the Asiatic material. Another very important accession, also filling numerous gaps in the Asiatic series, consisted of 540 skins of birds from India, containing a large number of forms new to the Museum, collected by the Smithsonian Institution-Yale University Expedition. By purchase, 28 sets of eggs and 35 skins of Manchurian birds, filling still other gaps in the Asiatic collections, were obtained from A. L. Loukashkin. F. D. Smith, of Caracas, Venezuela, donated 134 Venezuelan bird skins taken from an area hitherto unrepresented in the Museum series. A transfer from the Navy Department of 28 bird skins from Truk, Caroline Islands, brought to the Museum the first material from that island. As gifts the Museum received 25 bird skins from Venezuela from the Carnegie Museum, Pittsburgh; 24 bird skins from Venezuela from Ventura Barnés, Jr.; 10 bird skins from Brazil from Donald W. Lamm; 36 skins of hawks from various parts of the world from Col. L. R. Wolfe; and 1 skin of a duck new to the Museum from the Instituto de Ciencias Naturales, Bogotá. All these accessions contained one or more forms or species new to the Museum collections. A Sumatran pheasant, *Chalcurus chalcurus*, also received as a gift, from the Rijksmuseum van Natuurlijke Historie, Leiden, represented a genus new to the collection, while in two exchanges with W. H. Phelps five Venezuelan birds new to the Museum were secured.

Reptiles.—The following are foremost among the year's accessions: 25 Brazilian frogs, part of them from the State of Paraná, from which

the Museum has hitherto lacked amphibians, received as a gift from Dr. Paulo Sawaya; 112 reptiles from Bikini, another region previously unrepresented in the collections, collected during Operation Crossroads for the Museum; a gift of 96 reptiles and amphibians from Colombia, including several specimens new to the study series, received from the collector, Maurice K. Brady; and a gift of 14 reptiles and amphibians from Bolivia received from Dr. Raymond Gilmore. Continued donations from Anthony Curtiss include 72 reptiles and amphibians from Haiti, which materially advance a supplement planned for the Herpetology of Hispaniola published by Dr. Cochran in 1941, inasmuch as the ranges of several of the species are increased, and data for variation studies and color notes are included. While participating in a fisheries survey of Guatemala, Dr. Robert R. Miller collected 85 reptiles and amphibians for the Museum.

Fishes.—Two large and outstanding collections of fishes were received during the year as the result of the Smithsonian's participation in two federally sponsored projects. The first of these comprised 38,709 specimens taken during Operation Crossroads at Bikini and in the northern Marshall Islands by Dr. L. P. Schultz and Capt. Earl S. Herald. The number of species exceeds 300, and it is the first time that large enough series of certain species have been taken to enable a study to be made of anatomical variations among the various island populations. The second accession was obtained by Dr. Robert R. Miller, associate curator, in cooperation with the United States Fish and Wildlife Service and the Guatemalan Government, consisting of over 28,000 fishes from Guatemala, one of the best collections of freshwater fishes ever made in Central America. Other important accessions include two transfers totaling 2,272 tropical fishes from United States Naval Medical Research Unit No. 2, received through Ensign David G. Frey, and the following gifts: 5,975 Florida fishes from Capt. Earl S. Herald; 706 Argentine fishes from Tomás L. Marini; 44 fishes collected in the western tropical Pacific by the donor, Lt. James R. Simon; and 704 fishes taken by the collector Dr. Carl L. Hubbs, in Baja California. Luis René Rivas collected 472 Cuban fishes, an important accession, and W. P. Knoch collected 23 specimens of *Cottus annae*, the first time this species has been obtained since it was described nearly 70 years ago. A cotype of *Nannocampus nanus* was received as an exchange from the Zoological Institute, Lund, Sweden. Another exchange of 32 fishes from the British Museum through Dr. Ethelwynn Trewavas included the paratypes of seven species. Other important accessions include: From the Escuela Nacional de Ciencias Biológicos, through Dr. José del Villas Alvárez, four paratypes of the blind Mexican characin, *Anoptichthys antrobius*; from the Zoological Mu-

seum, Amsterdam, the Netherlands, through Dr. L. F. deBeaufort, a specimen of *Rachovia hummelincki*; from the Chicago Natural History Museum, as an exchange, through Loren Woods and John Winn, 4 paratypes of fishes from Guatemala and 15 paratypes of *Melaniris sardina*.

Insects.—About 5,000 specimens were added to the entomological collections as the result of the field work of three members of the Museum staff. Of these, over 2,500 were collected in Colombia by the curator, Dr. E. A. Chapin, in 1946; about 2,000 were obtained by Dr. J. P. E. Morrison as a part of the Operation Crossroads biological investigations; and nearly 400 specimens of aquatic insects were taken by Dr. Robert R. Miller during a survey of the fresh-water fishes of Guatemala. Another 12,000 specimens, in three accessions, came to the Museum as a direct result of the war. The first was a gift of about 1,500 specimens from the Philippine Islands and New Guinea, collected by Carl O. Mohr; the second, about 4,500 specimens collected in the Philippines and presented by Dr. Frank N. Young; the third was a transfer from the Naval Medical Research Unit No. 2 of nearly 6,000 specimens of mosquitoes, resulting from the Unit's official investigations in the South Pacific. Other especially noteworthy accessions included about 16,000 specimens received from N. L. H. Krauss, who collected them in Mexico and the Canal Zone in the course of investigations carried on by the Bureau of Entomology and Plant Quarantine; the gift of H. G. Barber's personal collection of Hemiptera, amounting to 3,485 specimens, and including some type and paratype material; and the annual transfer of specimens from the United States Department of Agriculture, which this year totaled 65,000 specimens.

Marine invertebrates.—From among the year's many significant accessions in this division it is not an easy task to select the more important ones. A number, however, are especially noteworthy: Dr. Horton H. Hobbs, Jr., donated a considerable part of his personal collection of crayfishes, gathered largely in Florida over a period of several years. Comprising some 11,000 specimens, it is by far the most important series of crayfishes from the southeastern United States. From Dr. David G. Frey were received more than 4,000 crustaceans from the Philippines, principally fresh-water prawns, one of the most extensive collections of this group ever made in the archipelago. Two accessions cover nearly 7,400 specimens of miscellaneous marine invertebrates collected for the Museum by Drs. L. P. Schultz and J. P. E. Morrison in the Marshall Islands during Operation Crossroads. Dr. Martin Johnson, participating in the same Operation, secured 827 additional invertebrates, which he presented. Other gifts worthy of note were those of Leslie Hubricht, 2,973 specimens of worms and

crustaceans from various localities, including many desiderata from his outstanding personal collection of fresh-water invertebrates; Dr. Arthur G. Humes, 890 crustaceans from French Morocco, the Philippines, Borneo, and New Guinea, including some very well preserved specimens of desirable material from little-known regions; Dr. Willis L. Tressler, 600 specimens of ostracods from Brazil, including type material of four species; and Dr. Folke Linder, 333 specimens of identified brachiopod crustaceans from California, Washington, Africa, Sweden, Siberia, and Australia, including paratypes of eight species; in part in exchange. Type material was also received from: Dr. Robert W. Pennak, seven slides containing 15 cotypes of five species of copepods; Dr. M. C. Meyer, the holotype of a leech; Dr. Horton H. Hobbs, Jr., holotype, allotype, and morphotype of a crayfish; Dr. M. W. de Laubenfels, holotypes of two species of sponges from North Carolina; Dr. W. K. Fisher, the holotype of a sipunculid worm from California; Dr. Arthur G. Humes, 31 slides comprising types of a copepod from Borneo; and Dr. A. S. Pearse, holotype, allotype, and paratype of a parasitic isopod crustacean. In addition to the above, Dr. J. A. Cushman reports that 706 slides of figured specimens have been added to the type collection of Foraminifera, bringing the total in that collection to 10,640 slides.

Mollusks.—The largest and most important molluscan accession for the year comprised some 200,000 specimens collected for the Museum by the associate curator of the division, Dr. J. P. E. Morrison, during the Operation Crossroads biological investigations in the Marshall Islands. Other large or otherwise valuable accessions included: transfer of 25,000 specimens, mainly of land and fresh-water mollusks, from China, the Philippines, and the Marianas, from Naval Medical Research Unit No. 2; and 200 specimens of mollusks from the Philippines, from the Commission on Schistosomiasis of the Office of the Surgeon General, War Department; an exchange of 4,300 specimens of mollusks from various localities from the Museum of Comparative Zoology; and gifts of 1,200 marine shells from Okinawa from the collector, Dr. A. R. Loeblich, Jr.; 730 specimens of marine mollusks from Yap, Ponape, and other South Pacific islands from Dr. Josiah Bridge; 310 specimens of mollusks from Pavuva Island, Russell Group, Solomon Islands, from Walter E. Wing; 265 specimens of marine mollusks from Cebu Island, Philippines, from Dr. Asela B. Franco; 72 specimens of mollusks from Iran and Egypt from Rev. H. E. J. Biggs; a rare new *Voluta* from off East London, South Africa, from H. J. Koch; and a specimen of *Bathyaurinia torrei* from off Punta Allegre, Camagüey, Cuba, from the Museum of Comparative Zoology. Specially to be mentioned is the type material included in a number of

accessions, as follows: 65 specimens of cyclophorid snails from Colombia and Ecuador, including the types and paratypes of 3 new species from Ralph W. Jackson; 64 specimens of landshells from Mexico, including the types of 3 new species, from Miss Marie E. Bourgeois; the paratypes of 4 species of chitons from California and western Mexico, from Dr. S. S. Berry; 5 mollusks from California, including 2 paratypes of *Ocenebra keenae*, from Mrs. R. Bormann; and 2 neoparatypes of *Anodonta implicata* Say from Plymouth, Mass., from the Museum of Comparative Zoology.

Helminths.—Six of the 11 accessions of helminths for the year consisted wholly of type material representing 12 new species received from the following donors: Ralph F. Annereaux, Dr. Ellsworth C. Dougherty, Prof. Merle F. Hansen, Edward K. Markell, Dr. Robert Rausch, and the College of the Pacific, through Robert Menzies. The remaining accession, a gift from Leo Kartman, contained 88 specimens of parasitic nematodes and cestodes.

Corals.—Four accessions brought 35 specimens of corals to the national collections from various Pacific areas, chiefly the Marshall Islands, Okinawa, Yap, Ponape, and other islands. The collectors were Dr. Leonard P. Schultz, Capt. Earl S. Herald, Dr. A. R. Loeblich, Jr., Dr. Josiah Bridge, and Dr. Martin W. Johnson.

Echinoderms.—The two leading accessions in this division resulted from the efforts of Drs. J. P. E. Morrison and Leonard P. Schultz in connection with Operation Crossroads at Bikini and elsewhere in the Marshall Islands. They secured for the collection 114 and 138 echinoderms, respectively.

Plants.—Especially worthy of note among the year's more important botanical accessions are the 4,800 specimens collected in St. Vincent by C. V. Morton, associate curator. This reconnaissance, made possible by funds provided by Ernest N. May, of Wilmington, Del., returned to the National Herbarium a wealth of plant material from one of the Lesser Antilles from which the Museum heretofore had but very scanty representation. In three transfers from the Bureau of Plant Industry, the Museum received 5,500 grasses collected in Brazil by Jason R. Swallen while engaged on a cultural-relations project for the Department of State; a fourth transfer consisted of 1,500 specimens of bamboos from the southern United States and tropical America, collected for the Office of Foreign Agricultural Relations by Dr. F. A. McClure; other transfers included 762 specimens from Japan and Formosa, received from the Natural Resources Section, GHQ, SCAP, in Tokyo, consisting in large part of specimens collected by Japanese employed by the NRS to collect for the Smithsonian Institution, and in part consisting of the personal collections

of Capt. Allis F. Hussey, a forester with the Natural Resources Section. In seven accessions Dr. Henri Pittier presented 1,186 specimens from Venezuela. Many of these came from the flat-topped mountain of Roraima. Among other gifts are to be numbered 1,067 specimens from Argentina and Uruguay, received from Dr. H. H. Bartlett; 642 specimens of Ecuadorian grasses and sedges received from the collector, Dr. M. Acosta-Solis; 2,160 specimens, mostly from North America, presented by the estate of Edward D. McDonald; 299 specimens collected at Bikini as a part of Operation Crossroads and received in 3 accessions from the donor and collector, Dr. W. R. Taylor; 455 specimens from the South Pacific Islands from DeKalb Russell, Jr.; 1,158 specimens from Martinique and Guadeloupe from Dr. H. Stehlé; 1,007 specimens from Guadeloupe, in 4 accessions, from Adrien Questel; and 1,377 specimens from Virginia and West Virginia received from H. A. Allard. Exchanges accounted for 28 of the year's more important accessions: In 8 such accessions 1,429 specimens from Mount Roraima, Venezuela, and from Ecuador, collected by Dr. Julian A. Steyermark, were received from the Chicago Natural History Museum; 525 specimens of lower cryptogams were received from the Naturhistorisches Museum, Vienna; 377 specimens from Malaya and Australia came from the Arnold Arboretum; 249 ferns from Hongkong from the University of Michigan; 342 specimens, mostly from Venezuela, from the Institute of Tropical Agriculture, Puerto Rico; 100 specimens of Armenian plants received from the Botanical Institute of the Academy of Sciences of Armenia, Erevan, U. S. S. R.; 150 specimens from Czechoslovakia and Jugoslavia from the Museum Nationale, Prague, Czechoslovakia; 672 specimens collected by Dr. Adolpho Ducke in Brazil, and including many isotypes, were received from the Instituto Agronomico do Norte, Belém; 1.010 specimens from Nevada and Utah and 425 specimens from Surinam and British Guiana, in 3 accessions, were received from the New York Botanical Garden; 1,225 specimens collected in Ecuador by E. Asplund, from the Naturhistoriska Riksmuseet, Stockholm; 749 specimens from western Colombia, in 2 accessions, from the Comisión Botánica of the Department of El Valle, Colombia; 120 specimens from Surinam from the Botanisch Museum en Herbarium, Rijksuniversiteit, Utrecht, Netherlands; 100 specimens from the Belgian Congo from the Jardin Botanique de l'État, Brussels; and 385 specimens of Colombian plants, in 5 accessions, from the Instituto de Ciencias Naturales, Bogotá. There were also 3 accessions obtained by purchase; 2 from the Chicago Natural History Museum totaling 2,400 photographs of type specimens in European herbaria; and 1, consisting of 156 specimens from the almost wholly unknown Cerro Parima,

which were obtained from the collector, Capt. Felix Cardona, a member of the commission surveying the boundary between Venezuela and Brazil.

Diatoms.—Two accessions of special interest comprised 15 samples collected in the Valley of Mexico by Dr. H. de Terra under the auspices of the Viking Fund for the purpose of aiding the determination of the ecological conditions under which early man and the imperial mammoth and other animals of that time lived in that area; and from B. Tindale 7 samples from Victoria and Queensland, Australia, a region from which the Museum has almost no material.

Distribution and exchange of specimens.—Duplicate zoological specimens distributed to museums, research organizations, educational institutions, Government agencies, and private individuals aggregated 128 transactions; 3,726 specimens and 4 lots of photographic material were sent out in exchange; 914 specimens and 3 photographs and a strip of microfilm as gifts; and 51 specimens as transfers; 2,148 specimens of plants were distributed as exchanges to 34 institutions and correspondents. The greater number of these specimens were distributed for the furtherance of current and prospective scientific work by the recipients.

Number of specimens under the department.—The summary of specimens given below is based on the numbers estimated from the previous fiscal year, with the addition of the specimens accessioned during the present year and the deduction of specimens removed during the same period. The figures of the early estimates were approximate and have been revised from time to time. This year the count of specimens in the division of birds includes the nests for the first time. No estimate has yet been made for the corals. In several of the divisions lots consisting of minute organisms are frequently counted as single specimens though they may contain hundreds and even thousands of individuals, the enumeration of which could serve no useful purpose. Processed specimens such as plants, mounted diatoms, helminths, and other specimens prepared for study and permanent preservation as microscopic slides or otherwise during the year from duplicate and other material on hand account for any unspecified increase in the annual totals. Last year as the result of a typographical error the words alcoholics and skeletons under birds were transposed.

Mammals	254, 010
Birds:	
Skins	303, 957
Skeletons	18, 431
Alcoholics	10, 112
Eggs	93, 263
Nests	3, 733
	429, 496
Reptiles	133, 172
Fishes	1, 403, 369
Insects	5, 960, 544
Marine invertebrates	1, 098, 124
Mollusks	3, 387, 976
Helminths	43, 423
Echinoderms	178, 089
Plants	2, 256, 537
Diatoms:	
Slides	20, 870
Crude and prepared samples	25, 130
	46, 000
Total	15, 190, 740

INSTALLATION AND PRESERVATION OF COLLECTIONS

Cataloging.—Of the 533,098 specimens or lots of specimens accessioned, 245,065 were cataloged or processed, leaving a backlog of 1,065,210 uncataloged specimens or lots of specimens.

Exhibition.—No major exhibition work was possible during the year because of the lack of labor and materials to construct the necessary cases. The chief exhibits preparator and his staff have, nevertheless, been busy with many and varied projects concerned with public exhibition. Enough specimens were mounted or completed for four habitat groups: Two, red wolf and puma, for the North American mammal hall; one of Liberian animals for a contemplated African hall; and an Antarctic group based on materials collected by the United States Navy's Antarctic Expedition. In anticipation of other large groups, five miniature models for groups were completed as follows: Bison, pronghorn antelope, clouded leopard, roloway guenon, and puma. Full-scale models were made of the plains wolf, clouded leopard, four penguins, and the roloway guenon.

In the hall of invertebrates several cases were shifted to facilitate the construction of a suitable storage for the study collection of corals. The glass backs of seven bird exhibits and that of the giraffe were painted to form more fitting backgrounds for these displays. Commendable progress was made with the rockwork intended for the walrus exhibit; 36 casts of rock formation were completed and colored.

Constant and worth-while though not particularly conspicuous improvements were accomplished throughout the exhibition series, such as: Sanding the bottoms of cases of mounted animals in the synoptic and regional series, installing appropriate rockwork, and rearranging the exhibited animals with regard to their habits, habitats, and zoogeographic distribution. With additional laborers detailed to assist the preparators, it was possible to open most of the cases in the exhibition halls and to clean the glass inside and out; to wash shelves; renovate, repair, and fumigate the exhibits, and to attend to certain desirable changes in the labeling of specimens. The curator of insects, Dr. E. A. Chapin, personally undertook the rehabilitation of the Iddings collection of Lepidoptera, which is to be completely rearranged and provided with new labels.

Mammals.—The collection of skulls and skeletons of large mammals stored on the second floor as a safety precaution during the war was returned to the fourth-floor storage. The skeleton collection is now fairly satisfactorily arranged, but overcrowded in many sections. The annual inspection and fumigation of the cases of skins and the embalming of skins and the replacing of evaporated fluids in jars and storage tanks in which the collections are held was completed during the year.

Birds.—The merging of the Museum and the Fish and Wildlife Service collections of bird skins actively undertaken during the year has so far covered the families from the Struthionidae, or ostriches, to part of the Anatidae, the swans and geese. Extensive reidentification and relabeling of the remaining study collections were accomplished. The entire skeletal collection was rearranged, and new case and tray labels were made where needed. As in previous years, all accessioned material was identified at least to species for catalog purposes. All collections were thoroughly poisoned against insects, and alcohol was replaced in alcoholic collections where needed. About 300 sets of eggs were incorporated into the main egg collection.

Reptiles, amphibians, and fishes.—All containers in use were checked and, except for overcrowding, the collections as a whole are in a satisfactory condition. Additional shelf space and containers are a serious need. The general routine of cataloging, labeling, filling, and refilling of containers of all small current incoming material was kept up to date, but identification and cataloging of several large recent accessions in fishes will require several years for completion.

Insects.—In general, the status of the insect collection is good, but considerable rearrangement is called for in certain groups. There is a heavy need for cases, insect drawers, and slide-storage equipment, and a serious shortage of jars and wooden racks for the preservation of alcoholic material.

The genera *Epilachna* and *Hippodamia* and the New World material of the genus *Onthophagus*, family Scarabaeidae, were completely rearranged by the curator, Dr. E. A. Chapin. He also worked over the collection of scorpions and harvestmen. The associate curator, Dr. R. E. Blackwelder, carried out routine work on the staphylinid collections. This included considerable rearrangement of important series to make these beetles reasonably accessible for revisionary work. Associate Curator W. E. Hoffmann completed the rearrangement of the Pentatomidea of the Oriental Faunal Region, including necessary remounting and some repair work, and rearranged considerable African and Australian material. Most of the specimens have now been classified to genus and in many cases to species. This work was greatly facilitated by the card catalog of literature made in connection with Mr. Hoffmann's study of the Oriental forms.

In the Orthoptera and neuropteroid groups several restricted sections, including the important and difficult grasshopper genera *Melanoplus* and *Conalcea*, the North American roaches of the subfamily Polyphaginae, and the New World material of the neuropterous family Sisyridae were critically studied and reorganized by Dr. A. B. Gurney.

Several lots of material received from J. P. Kryger, of Denmark, were incorporated in the collections of larval Coleoptera, as well as several valuable series of reared scarabaeid larvae received from Dr. P. O. Ritcher, of the Kentucky Agricultural Experiment Station. The curatorial work on the dermestid and coccinellid larvae was completed, placing that collection in excellent condition. Virtually all the adult Carabidae belonging to the Mexican series were transferred to trays. Several parts of the scolytid collection were expanded and rearranged, as well as 10 drawers of North American weevils of the subfamily Cossoninae.

The amalgamation of the National Museum, Barnes, and Brooklyn Museum collections of North American Notodontidae was completed and about one-fourth of the collection of South American butterflies of the family Danaidae was rearranged in accordance with the latest revisions. Before leaving for an extended period of study at the British Museum, J. F. Gates Clarke was able to complete work on the Oecophoridae in the planned segregation of all the holotypes of Microlepidoptera.

In the Hemiptera collections it was possible to segregate the collection of Australian and Pacific Island Fulgoroidea with preliminary sorting to species, to segregate the European Cicadellidae, most of which are identified, and to segregate the miscellaneous Fulgoroidea which were mixed with unsorted Cicadellidae. The subfamily Ceropinae was rearranged, as were also certain portions of the collection

of Cicadellidae. In the Heteroptera about 1,600 specimens from the McAtee and Stoner collections were incorporated, and material totaling nearly 10,000 specimens belonging in 20 families was rearranged; the greatest improvement was made in the families Pentatomidae, Miridae, Lygaeidae, and Tingidae.

Work on the collection of Diptera included incorporating the Shannon collection of pinned specimens and microscope slides, which added materially to the reference collections of European and South American species. More than 150 schmitt boxes of Diptera, including principally material received from the Bureau of Entomology and Plant Quarantine and a considerable volume collected in the South Pacific area during the war, together amounting to at least 25,000 specimens, were sorted and properly distributed in the regular collections. The Townsend genotype collection, consisting of five full drawers of specimens, representing genotypic species with one or two specimens of each form, was also incorporated into the Museum collection. This is a particularly valuable collection, because the specimens represent Townsend's views on the identities of the numerous species and because it includes considerable material obtained by the donor through exchange with European specialists in Diptera.

Among the Hymenoptera all unidentified sawflies were sorted to family, and the hymenopterous larvae, consisting mostly of sawflies, roughly sorted to groups. The Aulacidae and about 15 groups of Ichneumonidae, as well as the larvae of four families of sawflies, involving the contents of about 25 drawers and 15 racks of alcoholic material, were completely restudied and rearranged. The holotypes of the Symphyta were segregated and arranged in separate labeled trays in nine drawers. The bees were entirely rearranged in accordance with Michener's recent classification. The type collection of aculeate Hymenoptera, consolidated for storage during the war, was systematically rearranged by families and genera and alphabetically by species within genera. Professor Cockerell's working collection of named bees contained in more than 20 schmitt boxes was incorporated into the permanent collection, resulting in a significant increase in the number of named species, particularly from Australia and Europe. Four schmitt boxes of named Sphecidae from the private collection of H. T. Fernald were likewise incorporated. The collections of Hymenoptera are in reasonably good order, but a great deal of reorganization is yet needed in numerous families, both in the aculeates and in the Parasitica.

The Thysanoptera or thrips collections steadily improved throughout the year, owing largely to additions from J. C. Crawford and Floyd Andre.

In the section of Collembola, Thysanura, and Entotrophi conspicuous improvement was made in the collection of Iapygidae. Both the slide and the alcoholic collections were completely reorganized and properly labeled. The slide collection of Thysanura was also rearranged and much work done in organizing the available Collembola for ready reference.

Among the collections of ectoparasites and Acarina special emphasis was placed this year on the sorting of the Museum material belonging to the superfamily Oribatoidea, the material being critically restudied and classified to genera and species wherever possible. Although considerable attention was given the chigger collection by Dr. H. E. Ewing and Dr. G. W. Wharton, collaborator, the collection expanded so enormously during the war years that it will require an immense amount of work before it can be considered in good order. The mites of the family Tetranychidae, as in past years, were sent to E. A. McGregor, of Whittier, Calif., collaborator, for identification, almost no material being held here.

Marine invertebrates.—For the first time in the history of the division a complete and accurate inventory of the material in its custody was undertaken for the purpose of establishing a reliable basis from which the annual percentage increase in the collections can be derived. As this inventory progresses, the collections are being rearranged to bring them into an orderly systematic sequence. At the present rate of growth, the collections will require more than the allotted space within a very few years.

The associate curator, Paul L. Illg, has assumed responsibility for the extensive collection of microscopic slides. This important collection, containing representatives of nine phyla (Protozoa, Porifera, Coelenterata, Platyhelminthes, Trochelminthes, Molluscoidea, Annulata, Arthropoda, and Chordata), has long needed rearrangement, in order to make the slides readily available for study. The assistant curator, Frederick M. Bayer, was given direct charge of the inventory and rearrangement of the stacks.

Mollusks.—The study collections, housed in standard storage cases, are in excellent condition and need very little attention since the cases are dustproof. The physical condition of the alcohol collection is good.

Helminths and corals.—No changes were made in these collections in the past year. The corals are in need of more intimate curatorial supervision than is now possible with the present staff. The helminths are housed in the zoological division of the Bureau of Animal Industry, where they are constantly consulted and kept up to date by the staff of that division.

Echinoderms.—Some thousands of alcoholic specimens, mostly ophiurans, were dried for identification and incorporation into the dry study collection.

Plants.—During the year 25,198 specimens of flowering plants and ferns were mounted, wholly by adhesive straps and sewing, 19,798 by contract and 5,400 by Mrs. Tillie E. Berger and Mrs. Josephine W. Shepherd, exhibits preparators. In addition, 4,610 photographs of type specimens were pasted on herbarium sheets. This represents an increase of 7,301 specimens and photographs mounted in 1946-47 over the preceding year. About 4,000 typed or printed descriptions and labels were pasted on sheets or on pockets for lower cryptograms. Approximately 51,000 specimens await mounting; this equals the number on hand at the close of last year.

Urgently needed floor space was released to the Herbarium when the American Association for the Advancement of Science moved to its own building. This permitted a major shift in the contents of the herbarium cases. The Alaskan collections and those of the local area were moved to the offices formerly occupied by E. C. Leonard and Dr. E. H. Walker. The fruit collection was transferred to the hallway on the second floor, and all lower cryptogams except the mosses were placed in cases in the large room under the sectional library. Material on the pine family, which for years occupied almost inaccessible cases on the third tier of the west balcony, was gone over by C. V. Morton and greatly condensed; its transfer to cases freed by the removal of the lower cryptogams has rendered it readily accessible.

During the year 400 specimens were added to the type herbarium, bringing the total number thus segregated up to 45,420.

Mr. Leonard continued in charge of lower cryptogams, devoting about one day a week to them, preparing material received for identification, for loan, or exchange to specialists in other institutions. John A. Stevenson, honorary curator of the C. G. Lloyd mycological collections, reports that this material was used increasingly during the year by visiting mycologists and correspondents, both American and foreign, who were interested particularly in the Polyporaceae (wood-rotting fungi) and the Gasteromycetes (puffballs). The presence of the type specimens of the approximately 1,500 species named by Lloyd adds greatly to the value of this herbarium unit.

Dr. Walker, associate curator, who is responsible also for the sectional library, shifted the books to allow more space for current publications.

Taxidermist shop.—In the taxidermist shop 65 mammals were skinned and made up; 9 skins were degreased; 600 skulls, ranging in size from tiny field mice to elephant and whale skulls, were cleaned; 20 complete skeletons were cleaned; various parts of large skeletons

were also cleaned and degreased as needed for study; and 30 skeletons, skulls, and other parts of skeletons were roughed out. Bird skins made up totaled 53; old skins remade 119; bird skeletons cleaned 91; bird skeletons roughed out 71; partial skeletons and skulls 17; eggs blown 19. Four mammals were mounted or remounted and four birds were mounted or are under construction. Celluloid reproductions were made of feet and bills for mounting specimens of three species of penguins; a hammerhead shark and five snakes were also reproduced. Two hundred requisitions for taxidermist services and 128 osteological requisitions were completed.

INVESTIGATION AND RESEARCH

Mammals.—Dr. Remington Kellogg, curator, continued his study of the pelages and cranial characters, measurements, weights, and geographic distribution of the races of North and Middle American white-tailed deer, and devoted some time to determining the characters differentiating the various forms of South American tufted *Cebus* monkeys. The associate curator, Dr. David H. Johnson, made further progress with the study of the mammals from the Pacific Basin, initiated under the Research Division, Bureau of Medicine and Surgery, Navy Department. Two preliminary papers on rodents from the Philippine and the Riu Kiu Islands were prepared and published. Philip Hershkovitz actively pursued his studies on the mammals that he collected in Colombia under the auspices of the Walter Rathbone Bacon Traveling Scholarship, completing for publication three reports on the squirrels, spiny rats, and water rats. He also partially completed reports on the monkeys, rabbits, bats, tapirs, peccaries, and deer represented in this collection. Gerrit S. Miller, Jr., research associate, continued to work on the revision of his list of North American mammals.

Birds.—The curator, Dr. Herbert Friedmann, saw through the press volume 10 of Ridgway's "The Birds of North and Middle America," brought the manuscript of the eleventh volume up to date, and continued work on the twelfth. Considerable time was given to the fifth edition of the A. O. U. Check List of North American Birds and to the Check List of the Birds of Mexico, by R. T. Moore, L. Griscom, and himself. He also completed a report, with F. D. Smith, on the latter's collection of birds from Venezuela, another on Nicéforo María's Colombian collection, a survey of the systematics of the American tree ducks (genus *Dendrocygna*), and published several short papers and book reviews. H. G. Deignan, associate curator, continued two projects, a check list of the birds of the Indochinese region and a critical catalog of the type specimens of birds in the National Museum.

During the year he published nine papers on Asiatic birds and one on the connection between the Hudson's Bay Company and the Smithsonian in the exploration of the American Arctic. Dr. A. Wetmore prepared various items for the fifth edition of the A. O. U. Check List of North American Birds and worked on his collections from Panama and Colombia, publishing a report on the birds of San José and Pedro González Islands, Panama, and two papers on new tropical American birds. With José Borrero, he published the description of a new species of duck.

Reptiles and amphibians.—Dr. Doris M. Cochran, associate curator, is bringing her paper on frogs of southeastern Brazil to conclusion. She also began work on a catalog of types in the National Museum containing references to published figures. A paper describing a new subspecies of frog from Brazil, belonging to the Brussels Museum, was completed and submitted for publication.

Fishes.—The principal research work of Dr. Leonard P. Schultz, curator, was on the reef fishes collected in the course of the biological investigations of Operation Crossroads. A preliminary report on this collection, prepared jointly with Capt. Earl S. Herald, was submitted to the United States Navy in September. On the basis of new Australian material of silversides, Dr. Schultz expanded his revision of the genera of atherine fishes. Two completed manuscripts were submitted for publication and three papers previously submitted were published during the year. Dr. Schultz and Loren P. Woods, associate curator, working on a systematic and descriptive catalog on the fishes of the Crossroads projects, covered a number of important families. Three papers by Dr. Robert R. Miller, associate curator, were published during the year. He completed a manuscript on a new genus and species of deep-sea myctophid from the Philippines; continued his variational studies of Pacific coast sticklebacks; prepared a list of the fresh-water fishes of western North America, north of Mexico; began a revision of the genus *Profundulus*; and accomplished the preliminary identification of Guatemalan fishes collected in 1946.

Dr. S. F. Hildebrand, ichthyologist of the Fish and Wildlife Service, assisted by Mrs. Ann Green, actively continued his studies looking toward a supplement to the "Marine Fishes of Panama," of which he and the late Dr. Seth E. Meek were joint authors. This report has been temporarily laid aside in order that Dr. Hildebrand can devote full attention to an account of the herrings of the western North Atlantic. Isaac Ginsburg was especially concerned with the preparation of a descriptive catalog of the fishes of the Gulf of Mexico, though giving some time to the study of the gobiid fishes.

Insects.—The curator, Dr. E. A. Chapin, completed a preliminary study of about one-fourth of the available material of the Coccinellidae

(lady beetles) of Colombia. Dr. R. E. Blackwelder, associate curator, brought to completion the text of the check list of the Latin American Coleoptera, except for the bibliography and index. Dr. Blackwelder also initiated an estimated 3-year project, a revision of the North American Staphylinidae, which will involve the study of genotypes and a complete reclassification of the family. In anticipation of his return to China shortly after the close of the fiscal year, W. E. Hoffmann, associate curator, completed the greater part of the classification of the Oriental Pentatomoidea, carding the literature pertaining to them. He also successfully reared locally secured specimens in order to obtain immature forms of known identity to trace development of structures useful in taxonomy and in the determination of the phylogenetic relationships.

Working with the Orthoptera and neuropteroid insects, Dr. A. B. Gurney completed a paper on certain striking Australasian walking-sticks which included a synopsis of the genus *Extatosoma* and another paper describing a new species of Gryllacrididae in which he discussed certain special glands of Orthoptera. A critical reevaluation of the genera of the family Grylloblattidae, embodying a review of the distribution of all species, is well under way, as is also a synopsis of the North American species of the cockroaches of the subfamily Polyphaginae. Dr. Gurney also virtually completed a revision of the New World representatives of the neuropterous family Sisyridae, which will contain descriptions of seven new species and a special treatment of the immature stages of species occurring in the northeastern states. He is engaged also in a study of the neuropterous families Dilaridae and Berothidae, with special reference to the immature stages of the Nearctic genera.

Of the several studies in progress on the Coleoptera, the one on coccinellid larvae undertaken by Dr. B. E. Rees before the war was completed. Dr. Rees also completed a paper on the larvae of the tribe Novini of the Coccinellidae. Work on rhynchophorous larvae was continued by W. H. Anderson. He completed one rather large paper on the larvae of the family Anthribidae, another on larvae of the weevil genus *Hypera*, and published a third establishing a system of nomenclature or terminology of anatomical parts for reference in connection with the descriptions of weevil larvae. L. L. Buchanan nearly completed two papers dealing with several genera of Curculionidae during the year, and W. S. Fisher finished and submitted for publication a comprehensive revision of the family Bostrichidae. Carl Heinrich devoted considerable time to the classification of the family Phycitidae which he first began several years ago. During the year more than 200 drawings of genitalia, wings, and other structural parts were made and the task of assembling the plates was begun. W. D.

Field began revising the New World Theclinae, family Lycaenidae, and resumed work on a revision of the New World Lithosiinae, family Arctiidae, on which he had started to work before the war. H. W. Capps concentrated on the development of a key to the larvae of the North American families of Lepidoptera upon which he had been working for some time. J. F. Gates Clarke prepared descriptions of several new species of Microlepidoptera for publication. In March he left for London to undertake a critical study of the types of Microlepidoptera in the Meyrick collection.

In the Hemiptera Dr. P. W. Oman took up the generic revision of the Cicadellidae, interrupted by the war. Louise M. Russell carried on researches with several small groups of Psyllidae and Aleyroididae, which included the critical study of the type material of the Crawford species of Psyllidae for the purpose of designating lectotypes. Dr. R. I. Sailer completed a revision of the genus *Trichocorixa*, family Corixidae. Otherwise his principal research project during the year was a study of the mirid genus *Tenthecoris*, a group of some importance as pests of orchids. Begun in 1944, it was completed and published under the joint authorship of T. Y. Hsiao and Dr. Sailer. Dr. Sailer also completed a study of the grass-feeding species of the pentatomid genus *Mecidea*.

Dr. Alan Stone, continuing his work on Diptera, gave some attention to a revision of the Simuliidae, begun six or seven years ago, finished work in certain genera of mosquitoes, and prepared descriptions of a number of new psychodid species of the genus *Culicoides*. C. W. Sabrosky continued his studies in the family Chloropidae, devoting considerable time to exotic forms and undertaking a revision of the larvaevorid genus *Winthemia*. He also completed and submitted for publication a study of the North American spider parasites of the family Acroceratidae and about a dozen short papers dealing with either nomenclatorial questions or treating small groups of flies contained in families in which he is specially interested.

The principal research on the Hymenoptera was directed toward the preparation of a catalog of the North American species. In this undertaking, C. F. W. Muesebeck will be assisted by about a dozen collaborators each working up the particular groups on which he has specialized. Considerable progress was made on the aculeate and parasitic sections. It is anticipated that about 18 months will be required for completion of the work. K. V. Krombein about finished his studies on the available material of the Scolioidea and Sphecoidea of the South Pacific. Dr. M. R. Smith published or submitted for publication several short papers describing new genera and species of ants, mostly from foreign sources.

J. C. Crawford prepared and submitted for publication three short papers describing new species of *Thrips*. Many new species were segregated in the course of the work of identification and notes made looking toward the preparation of descriptions when synopses of the groups involved can be prepared.

Grace E. Glance made important progress in arranging the Museum collections of the Collembola, Thysanura, and Entotrophi. An immense amount of work was necessary to bring the available material into order and to expand the collections to the point where solid research will be possible. A little progress was made on the revision of the collembolan genus *Xenylla* initiated last year.

In the field of ectoparasites and Acarina, Dr. E. W. Baker carried on intensive work on several groups of mites. He prepared and submitted for publication a large paper on the family Cheyletidae and continued work on a classification of the families of the mites, a project undertaken jointly with Dr. G. W. Wharton, of Duke University. Doctor Baker's work on the genus *Brevipalpus*, family Trichadenidae, was about finished, but completion will be postponed until he can study Australian material secured by Dr. H. Womersley. Further study is also being given the superfamily Oribatoidea and the parasitic mites, with a view to developing a sound arrangement.

Marine invertebrates.—The curator, Dr. Fenner A. Chace, Jr., completed a study covering the bathypelagic prawns of the family Oplephoridae from the Bingham Oceanographic Institution at Yale University. He also instituted revisions of the grass shrimps of the genus *Hippolyte* and of the small crabs of the genus *Micropanope*, based on the structure of the male gonopods. The most serious taxonomic problem encountered in working up this material from Operation Crossroads concerns the highly colored coral crabs of the genus *Trapezia*, which require a complete revision. Frederick M. Bayer, assistant curator, collaborated in this project by making detailed color and ecologic notes in the field during the second biological survey of the Marshalls under the auspices of the United States Navy. During the year Dr. Chace also prepared 39 short articles on Crustacea for the Collier Encyclopedia. The associate curator, P. L. Illg, worked on a revision of the family Lichomolgidae, copepods parasitic on other invertebrates, and on species of the order Notodelphyoida, chiefly parasitic on tunicates. Mr. Bayer began study of the West Indian alcyonarians, and also identified some of the alcyonarians collected during the first Crossroads project, besides assisting the curator with his revision of the coral crabs of the genus *Trapezia*.

Clarence R. Shoemaker, associate in zoology, continued studies on the American representatives of the amphipod family Talitridae. Mrs. Mildred S. Wilson, collaborator in copepod Crustacea, completed

a manuscript on a new parasitic copepod from a clam and studied the genus *Pupulina*, copepods parasitic on giant rays. In working over several of the largest gatherings of dredge samples from the Gulf of Mexico and the Caribbean, Dr. R. S. Bassler, head curator of geology and custodian of the Recent Bryozoa, obtained at least 10,000 specimens for the study collection. The choicest part of these was placed at the service of Dr. Raymond C. Osburn for his work on the recent Bryozoa. Dr. J. A. Cushman, collaborator in Foraminifera, completed a paper on the Bartlett Arctic Expedition Foraminifera, nearly finished the fourth and final part of the Foraminifera of the Tropical Pacific collection of the *Albatross*, 1899-1900, and made preliminary studies of the Deaderick collection of Foraminifera, which was presented to the Museum.

Dr. Folke Linder, of the University of Uppsala, on a grant from the Smithsonian Institution, spent three months working over the collections of brachiopods with a view to monographing certain genera and generally reorganizing the collection; while Dr. L. B. Holthuis, of the Leiden Museum, under a grant from the Allan Hancock Foundation of the University of Southern California, is devoting a year to the preparation of a report on certain families of shrimps received as a result of the Museum's participation in a number of Captain Hancock's cruises in the *Velero III*.

As in past years, specialists in other institutions have contributed materially to the services rendered by the division by graciously identifying specimens submitted to them. Nineteen separate shipments comprising more than 1,100 specimens have been sent to the following individuals for this purpose: Dr. E. A. Andrews, hermit crabs; Dr. H. B. Bigelow, fresh-water medusae; Dr. Wesley R. Coe, nemertean worms; Dr. Elisabeth Deichmann, alcyonarians; Dr. Ellsworth C. Dougherty, caprellid amphipods; Dr. Walter K. Fisher, sipunculid worms; Joel W. Hedgpeth, pycnogonids and sea anemones; Dr. Horton H. Hobbs, Jr., crayfishes; Dr. Libbie H. Hyman, flatworms; Dr. M. W. deLaubenfels, sponges; Dr. Folke Linder, brachiopods; Dr. J. Percy Moore, leeches; Dr. Raymond C. Osburn, bryozoans; and Dr. Willard G. Van Name, tunicates.

Mollusks.—In the course of cutting down the backlog of unidentified collections, the curator, Dr. Harald A. Rehder, accumulated material for two papers, one on a collection of new and interesting Mexican land shells and the other on new marine shells of the Antillean region. Several smaller papers were completed. The associate curator, Dr. J. P. E. Morrison, assisted by William K. Emerson, prepared a report on the mollusks that he gathered in the northern Marshall Islands during the Operation Crossroads. In addition he devoted considerable time to research on the Amnicolidae and

Planorbidae, in the interests of the U. S. Public Health Service in connection with their search for possible American molluscan hosts of trematode diseases of man and domestic animals. R. Tucker Abbott, assistant curator, identified current material and gave some time to the preparation of a paper on a comparison of the American species *Pomatiopsis lapidaria* and the Asiatic genus *Oncomelania*, also to the completion of a monograph on the medically important mollusks of the Western Pacific. These studies are based in part on NAMRU No. 2 collections. Dr. Paul Bartsch, associate, was engaged mainly with an account of the Pyramidellidae of the St. Petersburg, Fla., Pliocene. He also continued work on the Cuban Urocoptidae and West American Turridae, and completed a paper on the genus *Corculum* of the Indo-Pacific.

Echinoderms.—Austin H. Clark, the curator, nearly completed a paper on the Ophiuroidea of the Hawaiian Islands based primarily on collections made by the *Albatross* in 1902. Further work was done on part 5 of Bulletin 82, which is near completion. Some progress was also made with an account of the echinoderms of Biak Island collected by Frederick M. Bayer.

Plants.—Members of the staff worked on special portions of the collections made by Dr. Julian A. Steyermark in Venezuela and Ecuador, and by Dr. Bassett Maguire in Surinam and British Guiana, for inclusion in the general reports to be published by Dr. Steyermark and Dr. Maguire. So far, C. V. Morton, associate curator, has completed manuscripts on the Gesneriaceae and ferns of the Maguire collection and Jason R. Swallen a report on the grasses. The Colombian Government delegated two graduates of the Universidad Nacional, J. N. Idrobo and Alvaro Fernández, to assist the curator, Ellsworth P. Killip, with the Flora of Colombia, which has been under way for some time. Encouraging progress was made during the three months following their arrival. Work on revision of the Acanthaceae of Colombia and Argentina was continued by Emery C. Leonard, several genera being completed. Mr. Leonard also prepared manuscript for one plant family of his proposed Flora of Hispaniola. Dr. E. H. Walker continued his compilation of a bibliography of eastern Asiatic botany, and, as chairman of the Conference on the District Flora, held monthly meetings at the Herbarium looking toward the publication of a new flora of the District of Columbia and vicinity. Paul S. Conger, associate curator, continued work on the diatoms of the Presidential Cruise, and of the waters of Chesapeake Bay, besides reporting on samples collected in connection with studies of the occurrence of early man in the Valley of Mexico, by H. de Terra, and in the Boston area by the Phillips Academy. Some experiments on

new methods of single cell growth under natural conditions were also carried on.

The associates in botany actively continued their several researches, Dr. William R. Maxon studied tropical American ferns; Mrs. Agnes Chase completed her revision of the "Manual of the Grasses of the United States," and submitted the manuscript for publication by the United States Department of Agriculture; and Dr. F. A. McClure continued his studies on American bamboos under the auspices of the Office of Foreign Agricultural Relations.

Research by outside investigators.—During the year 1947 outside investigators, 21 from other Government agencies, availed themselves of the department's staff, facilities, or collections. To these and others there were 492 separate loans of material, totaling 71,998 specimens. The division of plants was responsible for 147 loans involving 18,744 specimens of plants. Outside investigators, further, were furnished a great deal of bibliographic and technical information as well as numerous identifications of specimens on a variety of subjects, but chiefly concerned with the systematics and the distribution of animals and plants and the preparation or amplification of accounts of the flora or fauna of particular areas or regions. A listing of the groups of animals and plants studied would largely recapitulate the classification of the entire animal and plant kingdoms. Other biological investigations included such diverse topics as the cranial characters of rodents, the auditory apparatus of carnivores, the hair of mammals, birds as hosts of trombiculid mites, of which some are known carriers of scrub typhus, morphology of insects, histology and morphology of the respiratory system of terrestrial hermit crabs, the composition of the skeleton of crinoids, and the utilization of marine plankton as food for man.

DEPARTMENT OF GEOLOGY

(R. S. BASSLER, *Head Curator*)

WITH the geological staff now at prewar strength, such progress was made in this department in completing assignments connected with the war and in forwarding the normal but increasing peace-time activities that the year's accomplishments are particularly outstanding.

Mineralogists Dr. W. F. Foshag and E. P. Henderson were still occupied the first four months of the year in Japan classifying and evaluating the large collection of gemstones assembled by the 8th Army at Tokyo, for which task General MacArthur had requested their services. Returning to Washington, Dr. Foshag completed reports incident to his previous 3½ years of geological surveying in Mexico under the wartime cooperative project between the two countries, leaving only a few special papers upon strategic minerals still under way.

Explorations for fossil vertebrates in the Cretaceous and Paleocene rocks of central Utah and the Eocene of southwestern and central Wyoming during the 1946 field season by Curator C. L. Gazin and his party resulted in many scientifically important specimens, particularly of smaller mammals and reptiles hitherto little represented in the Museum study series. With the appointment of Dr. David H. Dunkle as associate curator in charge of the reptile, amphibian, and fish collections, active field work, so essential to progress in the division of vertebrate paleontology, as elsewhere in the department, was resumed on a more comprehensive scale. Toward the close of the year, Dr. Dunkle headed an expedition to east-central New Mexico, where, assisted by Franklin L. Pearce, a prize exhibition slab crowded with amphibian skulls has already been quarried from the Triassic rocks near Lamy.

Several extended field trips undertaken to strengthen the collections of invertebrate paleontology were conducted by Curators G. Arthur Cooper and Alfred R. Loeblich, Jr., in the middle and western States, with short trips to the nearby Appalachian Valley. The wide variety and abundance of study material secured and the many new personal contacts made for the Museum were exceedingly gratifying.

Exhibition work has consistently increased with the advances in field and study projects. A rearrangement of the vertebrate halls, the addition of several new cases illustrating physical geology, and an exhibit explaining the method of extracting delicate fossil shells

and corals from solid limestone blocks through solution with dilute hydrochloric acid, are among the improvements. Portions of the special geological display prepared for the Smithsonian Centenary celebration proved of such general interest that they were retained in the regular Museum exhibition series.

Student guests from educational institutions in Central and South America and several more distant countries were welcome visitors in all the divisions during the year. Invertebrate paleontology alone had five research students from China, Australia, and New Zealand, each pursuing special problems, which in one case occupied the greater part of the year.

The personnel of the department had few changes. Dr. David H. Dunkle was appointed associate curator and Franklin L. Pearce preparator, both in the division of vertebrate paleontology, and Bertel O. Reberholt and James H. Benn were advanced to exhibits preparators.

ACCESSIONS

The year's accessions, totaling 233, added 205,549 specimens to the department as a whole, in contrast with 140 accessions and 45,163 specimens recorded for 1946. The three divisions of geology were represented as follows: Mineralogy and petrology, 80 accessions (3,821 specimens); invertebrates paleontology and paleobotany, 138 accessions (201,082 specimens); and vertebrate paleontology, 15 accessions (646 specimens).

Mineralogy and petrology.—In the systematic mineral collections gifts of species new to the collection were as follows: Nuevite, a new columbate-tantalate of yttrium and iron from Nuevo, Calif., from Prof. Joseph Murdoch; tinticite, a phosphate of iron from Tintic, Utah, from Prof. Bronson Stringham; and minnesotaite, a new iron silicate from Minnesota, from Prof. John W. Gruner. Specimens of johachidolite, heikkolite, kochite, reinformite, and todorokite from various localities in Japan were received in exchange. Hugh A. Ford presented a small specimen of the type material of roweite, a manganese calcium borate. Other noteworthy accessions were: A fine exhibition group of marcasite crystals from Ohio, gift of R. F. McAlister; an unusual wire-form aggregate of minute gold crystals from California, donated by A. C. Stockton; and a mass of nephrite jade of selected color, gift of W. E. Lockhart. W. H. Tomlinson deposited some rutile specimens described by himself.

Three small but important collections were obtained in exchange from Japanese sources, as follows: (1) From Kyoto Imperial University specimens of teshirogilite, naegite, enalite, hagatalite, and yamaguchilite, all rare species; (2) from the Imperial Science Museum, Tokyo, through K. Sakurai, fine tellurite crystals, unusual iolite crys-

tals in lava and many minerals from localities not previously represented in the Museum; (3) 14 typical Japanese minerals received from K. Masutomi. Minerals associated with emeralds from Muzo, Colombia, an exchange from the Ministerio de Minas y Petróleos of Colombia, through Prof. José Royo y Gómez, contained a fine matrix specimen of the uncommon rare-earth carbonate, parisite.

Forty-four mineral specimens in 12 accessions were purchased through the Canfield fund. Unusual among these were a fine crystal of chrysolite (peridot) from the Isle of St. John in the Red Sea; a large exhibition slab of the zinc arsenate adamite, in unusually fine and large crystals, from Mapimi, Mexico; a large and well-formed amblygonite crystal from Newry, Maine; malachite and azurite specimens from the Apex mine near St. George, Utah; and uranium minerals from the Ruggles mine at Grafton, N. H.

The Roebling fund secured two noteworthy specimens, one showing numerous crystals of the rare manganese arsenate, allactite, and the other many unusual triangular crystals of another rare manganese mineral, friedelite, both from Franklin Furnace, N. J.

The gem collection was increased through the gift by William B. Pitts of two strings of beads made of California orbicular jasper and chrysoprase. Gilman S. Stanton presented a collection of rough and cut spessartite garnets from excavations in New York City. Nicola G. D'Ascenzo added a cut gemstone of the rare mineral friedelite to his previous gifts. A fine 8½-carat stone of the new gem mineral brazillianite was acquired by exchange with Dr. Frederick H. Pough. Herman Eldot presented a series of four large pieces of topaz prepared especially for the Museum collections to show the various steps in fashioning a stone from the rough material to the finished gem.

Twenty-one meteorites not previously represented in the national collections were received during the past year, as well as specimens from 3 falls previously represented. Dr. Stuart H. Perry continued his interest in the collection by presenting the following specimens: Mertzon, Tex., iron, 3,719 grams; Hill City, Kans., iron, 25 pounds 10 ounces; Odessa "shale," Tex., 1,995 grams; and a stony meteorite from Atoka, Okla., 475 grams. Included also was an interesting stony meteorite of 2,082 grams, tentatively called "Loyola" because it was found unlabeled in the collections of Loyola University. So far this meteorite has not been identified as related to any known fall. Asbjorn Pedersen, of Buenos Aires, Argentina, donated a 206-gram individual of the Salavina, Argentina, meteorite. Walter F. Pond presented a 12.88-kilogram iron meteorite from Harriman, Tenn.

Through exchanges with the institutions named, the following meteorites were acquired: From the Academy of Sciences, U. S. S. R., Pervomaisky Saratov, Yurtuk, and Staroje Pesyanoe; the Kwasan

Observatory, Kyoto Imperial University, Japan, a 595-gram individual of Tane (stone); the Imperial Science Museum of Tokyo, specimens of the Tanokami, Okirai Village, Yonozu of Japan, and Koso Sho, China; University of Arizona, the Weaver, Ariz., Cruz del Aire, Mexico, Silver Bell, Ariz., Glorieta Mountains, N. Mex., and Wallapai, Ariz. An unidentified iron meteorite tentatively called "Southern Arizona" was also received from the latter source. A new undescribed stone of 62 pounds' weight, found near Walters, Okla., was purchased through the Roebling fund. One specimen of tektite from Central Java, East Indies, was obtained by exchange with Jeff Hill.

The Foreign Economic Administration, through Walter C. Hand and Dr. Andrew V. Corey, transferred 26 minerals and ores representing various localities in India. H. A. Bryson presented a specimen of tungsten ore, hubnerite, from Vance County, N. C., and Frank L. Hess, associate in mineralogy, who is interested especially in the rare ores, added a series of 15 cubes of various rare metals to supplement the collection of corresponding ores. Eight lots of ore specimens illustrating the occurrences of various districts were received by transfer from the United States Geological Survey. These include mercury ores from the Cuarenta, Huahuaxtla, Nuevo Mercurio, Canoas, and Sain Alto districts, Mexico; tin ores from Cartersville, Ga.; phlogopite mica from Oaxaca, Mexico; and tungsten ores from the Hamme district, N. C. The Geological Survey also transferred ores from Japan and Korea secured by Montis R. Klepper.

An unusually large and varied assortment of glacial varved clay concretions from Ryegate, Vt., the result of many years of careful collecting, was presented by Henry N. Pringle. This collection, including several thousand curious and imitative shapes, has been used as the basis of a descriptive paper by Dr. R. S. Bassler. A large exhibition slab of corundum-bearing gneiss, showing numerous well-formed crystals, was collected for the Museum by S. E. Clabaugh, of the United States Geological Survey.

Invertebrate paleontology and paleobotany.—Gifts received in this division comprised many specimens needed to fill gaps in the study series. Among these are 85 Mississippian ammonoids from Arkansas, from Roger C. Baker; numerous specimens and blocks containing silicified fossils from Lower Permian strata of New Mexico, from Dr. Carl C. Branson; extensive collections of Middle Devonian invertebrates from Guy Campbell; excellent Eocene echinoids from Florida, from Alfred G. Fischer; some fine Devonian fossils from Missouri, from Dr. D. K. Greger; 120 blocks of Cambrian and Ordovician limestone with choice silicified brachiopods, from the Arbuckle Mountains, from William E. Ham; 275 specimens of Tertiary fossils from Florida, from Charles R. Locklin; extensive sets of invertebrate

Paleozoic and Cretaceous fossils, including many microorganisms and bryozoans, from Dr. Alfred R. Loeblich, Jr.; 375 specimens of unusual Cambrian and Lower Ordovician fossils from Quebec, through Dr. Franco Rasetti; 4,000 specimens of Upper Devonian fossils from New Mexico, received from Frank V. Stevenson; 2,000 specimens of Paleozoic invertebrates from Virginia, representing collections made by the late Dr. Charles Butts, received from the Geological Survey of Virginia, and a similar collection from northwestern Georgia made by Dr. Butts, from the Georgia Geological Survey. Several accessions of Paleozoic fossils from the Walcott fund, which financed the collecting trips by Drs. Cooper and Loeblich, recorded approximately 36,180 specimens.

All transfers of the year were from the United States Geological Survey and included various lots of invertebrates and some type specimens.

Worthy of special mention among the materials obtained by exchange are a complete and unusual Middle Ordovician brittlestar from W. S. Cramer; 8 type specimens of Ordovician cystoids from Oklahoma, from Dr. C. E. Decker; 54 specimens of Permian fusulinids from Japan, from Tohoku Imperial University; 989 type or figured specimens of Tertiary plants from the United States and elsewhere, and 865 specimens of unstudied plant fossils from South and Central America, received from Johns Hopkins University; 179 specimens of Jurassic and Cretaceous brachiopods from the Muséum National d'Histoire Naturelle, Paris, through Dr. Jean Roger; 75 crinoids and blastoids from the Mississippian (Lake Valley formation) of New Mexico, from Dr. L. A. Nelson; 600 specimens of choice Upper Ordovician brachiopods and other fossils from Dr. W. H. Shideler; and 380 specimens of Paleozoic and Tertiary fossils from southeastern Australia, received from Sydney University, Australia, through Dr. Ida A. Brown.

Vertebrate paleontology.—The increased number of specimens acquired this year by the division results primarily from the resumption of field work, which had been discontinued during the war period.

Outstanding results of the field work include the discovery in one block in the Bridger Eocene beds of the skulls and portions of the skeletons of two unusually large rodents of the genus *Paramys*. Among the rarities in the season's finds were jaws and skeletal portions of the artiodactyl *Helohyus*, about five specimens of the minute insectivore *Nyctitherium*, various small primates and other insectivores, and remains of the marsupial *Peratherium*. Other significant additions to the Bridger collections were skulls of the large six-horned mammal, *Uintatherium*, the titanotheres *Palaeosyops*, and the rhinoceros *Hyrachyus*. The party also obtained a skull and skeletal por-

tions of the late Eocene oreodont *Mesagriichoerus* from Badwater Creek in central Wyoming, and portions of the skull of the Paleocene mammal *Periptychus gilmorei* from central Utah.

Among the materials transferred from the United States Geological Survey is a nearly complete skull and jaws of a Triassic reptile, a phytosaur, collected in the Petrified Forest of Arizona.

A skull of the extinct porpoise *Eurhinodelphis*, collected by Dr. Remington Kellogg and A. C. Murray from the Miocene at Scientists Cliffs on the Chesapeake Bay, further enhances the Museum's unusual collection of fossil cetaceans.

Distribution and exchange of specimens.—Geological materials distributed by the department during the year to other scientific and research organizations, Government agencies, schools and universities, students, and individuals totaled 11,332 specimens. Arrangements were made and completed for 42 exchanges in invertebrate paleontology and paleobotany and in mineralogy and petrology, amounting to 4,705 specimens. In the three divisions there were 4,247 specimens distributed on loan for study and research purposes, and 2,237 specimens were donated to worthy institutions. There were 7 transfers, 143 specimens, including a collection of minerals to the Department of State for transmission to Liberia.

Number of specimens under the department.—The following figures are derived by subtracting the number of specimens distributed to other institutions and individuals from those received during the year plus last year's total:

Mineralogy and petrology	260, 689
Invertebrate paleontology and paleobotany	2, 659, 127
Vertebrate paleontology	30, 408
Total	2, 950, 224

INSTALLATION AND PRESERVATION OF COLLECTIONS

With the appointment of a laborer for the department, it became possible to maintain the collections in more satisfactory physical condition. While rocks, minerals, and fossils, as a rule, are subject to less deterioration than animals and plants of today, they do require regular inspection, occasional cleaning, repairing whenever broken, and special attention when decay sets in through atmospheric and other conditions.

The major tasks of preservation in the care of the rock and mineral series were as follows: The entire ore and physical geology reserve sets (986 standard drawers) were thoroughly freed from dust with a bellows, which permits close contact with the specimens. Rocks and ores that showed an inclination to check or exfoliate with temperature

changes or to deteriorate by oxidation were treated with shellac and similar preservatives. Minerals that tended to absorb moisture were installed in airtight boxes. Exhibition specimens require special attention, since a choice mineral or a small meteorite, unless inspected regularly, may be found decayed into a loose mass of powder.

In the division of invertebrate paleontology and paleobotany, the multitude of fragile spun-glasslike specimens resulting from etching fossiliferous limestones require quite different treatment for permanent preservation. Such fossils can be covered with bakelite, a long process, but when dipped in alvar the fluid penetrates throughout their substances and closely cements them into durable form. The latter process was employed with most of the etched material. The few collections preserved in alcohol were given their usual examination and replenishment of liquid.

In the division of vertebrate paleontology the customary cleaning of the collections as a whole and the repair of broken specimens in both exhibition and study series were continued, accompanied by a more practical over-all rearrangement of each for more effective use.

Drs. Cooper and Loeblich report considerable time spent on the preparation of collections and individual specimens. The etching program noted in previous reports was continued as usual. About 48 drawers of free Permian fossils were added during the year by this process and several hundred specimens of Cambrian and Lower Ordovician brachiopods. Dr. Cooper prepared about 300 specimens by mechanical means which are to be used as types in his work on Chazyan and related brachiopods.

Dr. Loeblich washed, picked, and prepared many thin sections of Bryozoa and corals for his studies. He spent part of the year cleaning and rearranging according to geographic area the Ordovician collections of the stratigraphic series on the second floor, nearly completing the task. Sufficient room was saved to place some collections now stacked drawer on drawer into cases so that they will be available for use again.

Most of the smaller gifts and lots of invertebrate specimens received were labeled and distributed among the biological collections and the better specimens collected were sorted out and labeled for the biological collections.

All the paleobotanical type material was unpacked, with the help of Dr. R. W. Brown and William Salter. Dr. Brown has continued his invaluable work in caring for the Mesozoic and Tertiary plants, performing a great service in condensing and revising old collections.

Laboratory preparation of the fossil vertebrate materials was started on the 1946 collections from the Bridger Eocene by A. C. Murray and F. L. Pearce. Mr. Murray nearly completed preparation of a good

skull and jaws of a phytosaur from the Triassic of Arizona, while Mr. Pearce worked over an early collection of Permian amphibian remains from Texas, assembling rare skull material from small fragments. Both preparators devoted much of their time to assisting Chief Preparator Norman H. Boss in the preparation and mounting of the large *Camarasaurus* skeleton for exhibition. The preparators have kept abreast from year to year with the preparation of newly collected materials while still devoting a fair proportion of time to exhibition work.

Cataloging.—All the procedures under this heading, namely, the preparation, classification, labeling, numbering, and finally transferring the information to the catalogs and the specimens to the appropriate collection have been completed up to date in the division of mineralogy and petrology. The preparatory work was accomplished mainly by B. O. Reberholt, and the numbering, final cataloging, and placing in the collections by James Benn. The principal backlog in cataloging in the division of vertebrate paleontology lies in the identification of materials, together with the assembling of geologic and geographic field data.

Exhibition.—Much thought and planning have gone into exhibition work this year, particularly in vertebrate paleontology where important changes have been made in the arrangement of the two halls preparatory to introducing a large new dinosaur mount.

Norman H. Boss, the chief preparator, has spent nearly the entire year, with help from time to time from A. C. Murray and F. L. Pearce, in the preparation, restoration, mounting, and related construction work of the 26-foot dinosaur, *Camarasaurus lentus*. This specimen, from the Jurassic sandstone at Dinosaur National Monument in Utah, was received in an exchange several years ago from the Carnegie Museum. The laboratory work has been completed and the specimen is now ready to be moved to the main exhibition hall for the final installation. This dinosaur has been mounted horizontally in a pose nearly as discovered in the field, and should prove to be one of our striking displays. The changes in arrangement have placed most of the mammals in the east hall, making it truly a Cenozoic hall, and the dinosaurs and other reptiles in the main central one, which is thus illustrative of Mesozoic vertebrate life. The plaster replicas of a glyptodon and a proboscidean skull were removed to improve the quality of exhibition, and the Middle Eocene Bridger exhibits were segregated in a part of the fossil plant hall where they bring together an interesting assemblage of contemporary forms.

In the division of mineralogy and petrology, James Benn was actively engaged in improving the mineral and rock exhibits throughout the year. He also prepared two temporary exhibits, one for the

Smithsonian Centennial celebration and the other to illustrate the geology of caves for the annual meeting of the Speleological Society of America at the Museum.

INVESTIGATION AND RESEARCH

An appreciable advance was made on research work and identification of the reserve collections by the scientific staff. The head curator finished his monograph on Paleozoic corals, a work of several years' duration, and submitted the manuscript for publication. He also completed a memoir on the life of John M. Nickles, the geologist bibliographer of the United States Geological Survey, and an article entitled "Glacial Varved Clay Concretions of New England" for the Appendix of the 1947 Smithsonian Report. He continued his study of the Springer collection of *Cystoidea*, a class of rare extinct echinoderms fortunately well represented in the Museum. His laboratory work upon identification of the collections and reduction of backlog was concentrated upon the Paleozoic bryozoans, corals, and ostracods.

Curator W. F. Foshag completed reports on the fluorite deposits of the Tasco District and the copper-quicksilver deposits of Las Fraguas, Mexico, and sent the manuscripts and maps for final revision to the Comité Directivo para la Investigación de los Recursos Minerales de México. These reports cover part of the cooperative war work of the Smithsonian Institution, the United States Geological Survey, and the Mexican Comité. A report on the tin resources of Mexico was published as Bulletin No. 8 of the Mexican Comité. As a result of his work in Japan, a manuscript on the present status of the pearl-culture industry in that country was prepared by Dr. Foshag upon request of the Gemological Society of America and submitted for publication. The report on the Mexican volcano Parícutin is now about half completed. The laboratory tests for the study of the geochemistry of this volcano are well under way. An article entitled "The Birth of Parícutin" was completed and accepted for publication in the 1946 Smithsonian Report. Dr. Foshag acted as gem expert for the Post Office Department in its fraudulent claims section.

Associate Curator E. P. Henderson in his analytic work on the iron meteorites has completed the Linwood, Mertzon, Hill City, and Pine River falls. Dr. Stuart H. Perry, associate in mineralogy, forwarded his studies on the metallographical structure of iron meteorites and completed volume 7 of his large folio-size albums of micro-photographs covering ten previously unstudied irons. These students have prepared a manuscript describing the results of their research on the Linwood, Goose Lake, and Drum Mountains meteorites.

Curator G. A. Cooper made progress on his several research projects in invertebrate paleontology. The photography for his Chazyan

brachiopod study has been finished and 98 of the plates have been mounted. Work on the fossils and geology of the area about Caborca, Sonora, was continued and all the photography, with the exception of the Devonian fossils, has been finished.

Associate Curator A. R. Loeblich made considerable progress in the preliminary preparation of the Permian sponge fauna of the Glass Mountains in Texas and completed sorting the Silurian Bryozoa and other fossils of west Tennessee preparatory to their identification. The manuscript has been completed and many illustrations have been prepared for a paper on the Ordovician bryozoan genera *Constellaria* and *Stellipora*.

Research Associate J. Brookes Knight continued preparation of Permian snails, mainly by etching them from limestone. He finished a paper on "A Revision of the Classification of Gastropods" and is now preparing the necessary illustrations. His work on the revision of the gastropod series in the Museum collections resulted in the completion of the large family Murchisoniidae.

Curator C. L. Gazin's research in vertebrate paleontology has been directed toward a general study of the Tillodontia, an extinct order of early Tertiary mammals. This will comprise a history of their investigation, environmental considerations and phylogeny, as well as morphological description and taxonomic revision of all the known materials in the National Museum and other institutions. This study is part of a general plan of reviewing the rather large Bridger Middle Eocene fauna.

Associate Curator D. H. Dunkle continued his researches on Devonian fishes, begun while he was associated with the Cleveland Museum of Natural History, particularly on the arthrodires from the Cleveland shale. He has also in preparation a paper on fossil fishes from the Devonian of Missouri and one on some sharks from the Upper Cretaceous of Texas.

Several of the Geological Survey scientists have been occupied for a considerable time on official business outside of Washington. The entire staff of Tertiary paleontologists has been away at one time or another much of the year. Dr. Julia Gardner spent the first six months of the fiscal year working on the Eocene of the Gulf region. Late in December she transferred her activities to Japan, where she is still engaged in research. F. S. MacNeil is conducting researches on the Island of Okinawa; Dr. Ralph Stewart is continuing his field investigations in California. Dr. Wendell Woodring, having now returned to his paleontological studies, is completing a detailed study of the Miocene and younger sediments of the Santa Maria district, California, and of the Panama Canal Zone Tertiary, which he investigated during the winter.

In the field of Mesozoic paleontology, Dr. J. B. Reeside, Jr., is continuing his researches on Cretaceous invertebrates; Dr. Ralph Imlay is investigating the Middle and Upper Jurassic fossils of the western interior United States; Dr. L. W. Stephenson is completing his monograph on the Cretaceous Woodbine (Lewisville) fauna of the Coastal Plain. Dr. C. W. Cooke continued his studies of Mesozoic and Tertiary echinoids, and I. G. Sohn worked on the ostracods of the same eras.

In the field of Paleozoic paleontology, Dr. Edwin Kirk is occupied with American crinoids, Dr. J. S. Williams with the higher Paleozoic faunas of western United States and Alaska, Miss Helen Duncan, the Upper Paleozoic corals, and Dr. Wilbert Hass the Devonian and Mississippian conodonts of Texas and the Midwest.

In the section of paleobotany, Dr. R. W. Brown is continuing his work on Paleocene floras of the Rocky Mountains and adjacent Great Plains. Dr. J. A. Cushman is now concentrating on studies of Mesozoic Foraminifera. Dr. Ruth Schmidt is investigating X-ray techniques as applied to fossils in connection with her studies of the Ostracoda.

In the division of mineralogy and petrology, Dr. John P. Marble has continued his studies on the dating of rocks by the determination of the lead-uranium ratio. This research is a part of the work of the Committee on the Measurement of Geologic Time of the National Research Council. As in the past, our laboratory facilities have been made fully available to him. W. W. Brannock, of the United States Geological Survey, was granted laboratory space and facilities for ten months, at the request of the Director, to carry on his chemical investigations while the Survey laboratories were undergoing remodeling.

The staff of the division of invertebrate paleontology and paleobotany and members of the United States Geological Survey located in the Museum offices worked together as always. Members of the Museum staff identified collections brought in by the Geological Survey, and members of the latter returned the favor in full measure.

DEPARTMENT OF ENGINEERING AND INDUSTRIES

(CARL W. MITMAN, *Head Curator*)

THE department of engineering and industries had a most unusual year through important changes in the management of two of its three divisions, owing to the retirement or transfer of personnel, and through widespread changes in division assignments. Additions to the collections were nearly four times greater than in any single recent year.

The year also saw the establishment by the 79th Congress of a National Air Museum as a bureau of the Smithsonian Institution. To assist the Air Museum's Advisory Board in setting the project in motion, the Secretary on January 6, 1947, designated the head curator, Carl W. Mitman, as Assistant to the Secretary for the National Air Museum. In this capacity, Mr. Mitman with the able technical assistance of Paul E. Garber, curator of aeronautics, devoted much time and attention to the details of activities proposed by the Board. A statement of the work performed on the National Air Museum project appears in the Secretary's Report.

On September 16, 1946, the department welcomed Paul E. Garber on return from military furlough after nearly 5 years' service in the Navy. Commander Garber served principally in the Special Devices Division of the Bureau of Aeronautics in the development and production of training aids such as aircraft recognition models and controlled target kites. Latterly he was detailed to the Office of the Secretary of the Navy to prepare an engineering history of naval aviation during World War II.

The outstanding organizational changes, which were put into effect in the early part of the fiscal year, were the following:

The establishment of the section of manufactures in the division of crafts and industries and the transfer to this section of the collections relating to chemical and agricultural industries with the addition of the mineral industries collections from the division of engineering; the establishment of a section of land transportation in the division of engineering; the separation of the activities on medicine and public health from the division of crafts and industries and the establishment of a division of medicine and public health; and the separation of the section of aeronautics from the division of engineering and the establishment of a division of aeronautics.

Important changes and additions in staff were as follows: The appointment of William N. Watkins, former associate curator in the division of crafts and industries, to succeed Dr. Frederick L. Lewton, retired, as curator of that division; the honorary appointment of Dr. Lewton as research associate in the division of crafts and industries; the appointment of Jacob Kainen, former associate curator of the division of graphic arts, to succeed R. P. Tolman as curator of that division; the appointment of Dr. Charles Whitebread, former associate curator in charge of medicine and public health in the division of crafts and industries, as curator of the division of medicine and public health; the appointment of Paul E. Garber, former associate curator of the section of aeronautics in the division of engineering as curator of the division of aeronautics; the appointment of Alexander J. Wedderburn to the position of associate curator of the section of photography to succeed Dr. A. J. Olmsted, retired; the appointment of Fred C. Reed, former associate curator in the division of engineering to associate curator in charge of the section of manufactures; the appointment of Smith Hempstone Oliver to the position of associate curator in the section of land transportation; the appointment of Miss Mary Windhorst, former scientific aide in the section of textiles, division of crafts and industries, to the position of assistant curator, section of textiles, to succeed Mrs. Elizabeth W. Rosson; the appointment of Miss Grace L. Rogers as scientific aide, section of textiles, to succeed Miss Windhorst.

These changes in organization and staff assignments added one more member to the total professional staff of the department. The long-overdue need of clerical help to relieve the subprofessional and professional personnel of this class of work was partially satisfied by the appointment of three clerk-stenographers.

The Dahlgreen fund for the improvement of the graphic arts collections of the department continued to expand, with the sale of prints during the past year. The publication of a handsome catalog reproducing 70 Dahlgreen etchings in halftone was directly responsible for this increase.

ACCESSIONS

Accessions for the year totaled 183, comprising 5,239 specimens. This represents a very material increase over those of last year, amounting to 28 percent in accessions and 253 percent in specimens. The disposition of the year's accessions was as follows: Engineering 34 (455 specimens); crafts and industries 33 (1,963 specimens); graphic arts, including photography 75 (1,594 specimens); medicine and public health 23 (960 specimens); aeronautics 18 (267 specimens). Of these, the following are worthy of mention:

Engineering.—An outstanding accession of the year is the motor tricycle designed and built in 1897 at Pittsburgh, Pa., by Louis S. Clarke, automobile pioneer and one of the founders of the Autocar Company. This vehicle, which is referred to by Mr. Clarke as the first Autocar, has a 1-cylinder gasoline engine, connected through clutch, reduction gears, and differential to the two rear wheels. Mr. Clarke accompanied his gift with a bound volume of all the Autocar catalogs, instruction books, and parts lists from the beginning of the company through the early 1920's. The Chicago, Burlington & Quincy Railroad presented sections of the 112- and 129-pound torsion-resisting railroad rails developed by Chief Draftsman George R. Burkhardt. These are desirable additions to the collection relating to the development of the American railroad way and rail.

In the section of water transportation a noteworthy accession is the model of a ship of the type of Pilgrims' *Mayflower*, made and presented by George Schneider. This model follows the lines and details of the model produced a number of years ago by R. C. Anderson and L. A. Pritchard for the Pilgrim Society. Kenneth A. Foote made and presented an accurate model of the motor life boat *Cyril and Lilian Bishop* of the Royal National Life Boat Institute. A model of the S. S. *Excalibur*, 1930, was presented by the American Export Lines. The United States Maritime Commission added to the collection of models of its types a model of the cargo type C3-S-A2 and one of the single-screw tanker T2-SE-A1. Ralph E. Cropley continued to add to the collection of illustrations and data on ships and shipping.

Accessions to the communications collections include two instruments of the Beardslee magneto indicating telegraph of the 1860's, presented by Carleton College; an early audion triode tube presented by L. Herbert Pennington; and a television transmitting tube, RCA899, which was in service at station W2XBS (later WNBT) from June 30, 1936, to August 1946, presented by the National Broadcasting Co.

The Crocker-Wheeler Electric Manufacturing Co., Division of Joshua Hendy Iron Works, presented two nicely preserved early electric motors. One is a small sewing machine motor made by the C & C Electric Motor Co., in 1886, the other a Crocker-Wheeler 10 horsepower bipolar motor 1889.

Two accessions in the field of microscopy are of unusual interest. The curious ruling machine with which Charles Fasoldt, in the middle of the last century, produced ruled slides and gratings, prized over all others by many well-known microscopists, was presented by A. R. McEwen. Mr. McEwen also added a Rogers ruling machine of later date. Charlotte B. Ward presented a group of microscopes and accessories collected by Richard Halsted Ward, M. D., first president of the American Microscopical Society, and Dr. Henry Baldwin Ward,

parasitologist, her grandfather and father, respectively. The microscopes include many pocket and field types of instruments as well as a number of old and specialized forms of stands, illuminators, and stages.

A Solex micrometer given by Charles D. Shepard, National Bureau of Standards, measures machine parts by comparing the parts with standard ring or plug gages in combination with a jet of air escaping between the surfaces of the gages and parts. Variations in dimensions result in variations in air pressure which are read by manometer and scale calibrated in the desired units. Mr. Shepard states that this is one of the first instruments of the type brought to the United States.

Crafts and industries.—A historically important accession of the section of manufactures in this division was one of the two original rubber masticators developed by Thomas Hancock in England prior to 1850. The machine, consisting essentially of a long, heavy, iron ribbed roller enclosed in a cast-iron housing, was in continual use in the manufacture of rubber in England for more than 75 years. It was presented as a gift to the Museum by Sir Walrond Sinclair and Alan Sinclair, British Tyre and Rubber Co.

One of the outstanding accessions in the section of textiles came from Pacific Mills and includes fabrics and fabric applications showing dyeing, printing, and a chart featuring the production of cotton fabrics. E. I. du Pont de Nemours & Co. presented another interesting exhibit portraying the manufacture, properties, and uses of nylon. Other noteworthy items are: 31 specimens of cotton textiles for spring and summer, 1947, from the Cotton-Textile Institute, Inc.; 24 poplin, Scottish Clan tartans contributed by McCurrach Organization, Inc.; 30 specimens of "Lumite" upholstering, grille, and industrial fabrics woven of saran, gift from Chicopee Sales Corporation, and 4 specimens of "Webril," an unwoven cotton cloth from Kendall Mills.

The most valuable accession of the year in the section of wood technology is the collection of 964 woods received, as an exchange, from the Forest Products Research Laboratory of Great Britain. It comprises woods from British Honduras, Great Britain, India, Ceylon, Federated Malay States, Australia, New Zealand, Africa, and other localities, most of them heretofore unrepresented in the collections. Another very noteworthy accession of 182 wood specimens was received from the New York State College of Forestry in continuation of their wood technology project I. This project makes available to the section authentic specimens of woods of the United States, each backed by herbarium material from the identical tree, one set of which is deposited in the United States National Herbarium. A third valuable accession was received as a transfer from the Natural Resources Sec-

tion of the War Department, comprising 561 photomicrographic prints of the cross, radial, and tangential sections of Japanese woods.

Graphic arts.—The most notable accession received by this division was a microengraving machine capable of engraving the Lord's Prayer 781,250 times within a square-inch area. This miraculous machine was constructed for Alfred McEwen by the Reverend J. C. Crawford, after the original machine invented by W. Peters in London in 1852 and was presented to the Museum by Mr. McEwen's son, Alfred R. McEwen, Jr. It is exhibited near a minute engraving of the Lord's Prayer by McEwen, seen within the eye of a needle through a microscope, and completes a unique exhibit of microengraving.

Two outstanding accessions augmenting the motion-picture collections were received in the section of photography. The first was a 60-mm. motion-picture camera invented in 1893 by George Demeny, of France, and manufactured by Gaumont Co. around 1896, a gift from Oscar B. Depue. Cameras such as this, utilizing the beater-type movement common in that early period, were among the first successful motion-picture machines in continental Europe and were widely used. A small number reached America. The second accession was a 16-mm. Bell and Howell gun-type motion-picture camera adapted and used by the Navy to photograph the earth from a German V-2 rocket fired at the Army Ordnance Proving Grounds, White Sands, N. Mex., October 10, 1946. The rocket attained an altitude of 102 miles moving at a velocity of 4,800 feet per second. Accompanying the camera, which was received as a transfer from the Navy Department, were three photographs taken from an altitude of 200,000 feet (38 miles).

Two valuable accessions of similar character dealing with early photographic views of the District of Columbia and vicinity are worthy of mention. The first was the gift of the Honorable Carroll Reece, a regent of the Institution, and consists of 60 glass negatives taken in the late 19th century by the photographer Robert Stead. The second was a donation of Mrs. Carrie B. Snoddy, consisting of 143 lantern slides, both in black-and-white and in color, taken by the photographer Titus B. Snoddy, Sr., about 1899. Six examples of old photographic equipment were included.

Norman E. Mumford presented a 1911 Pathé Frères 35-mm. motion-picture projector. This hand-operated machine, utilizing electric lighting, is a highly desirable addition to the growing collection of early motion-picture projectors.

Charles W. Dahlgreen added 5 more of his etched copper plates to his previous gift of 94. These plates, deposited by the Smithsonian Institution, will be printed at a future date and added to those already in use in connection with the Dahlgreen fund.

The largest permanent accession of the year was the gift of George R. Goergens, who presented the section of photography with 46 examples of old photographic equipment together with a library of 143 books and magazines on photography, making a total of 189 specimens in all.

Fifteen photographic-equipment manufacturers presented as gifts a variety of modern material including light meters, motion and still cameras, projectors, and a contact printer. This material is of special interest in that it aids very materially in bringing the photographic collections up to date.

Medicine and public health.—The most valuable accession of the year in this division was a series of specially prepared transparencies illustrating the subject of hospitalization. These well-chosen views from typical American hospitals portray the hundreds of tasks involved in caring for patients from the time they are admitted until they are discharged. The American Hospital Association made and contributed this instructive series as a memorial to the late Dr. S. S. Goldwater (1873-1942), physician, hospital administrator, and author, who was commissioner of hospitals, New York City.

The most historically important specimen of the year was a "Grosse Flamme" X-ray machine with tube and tubestand developed by Albert B. Koett a few years after Roentgen's discovery of X-rays and first introduced at a meeting of the American Roentgen Ray Society at Niagara Falls, N. Y. It is thus one of the earliest American made machines of the kind. It produced a 12-inch spark, the largest usable spark at that time and had an electromotive force of 140,000 volts. By a special winding, an induction coil permitted the machine to operate on either direct or indirect current—a forerunner of the present auto-transformer. This historic machine, which is an important addition to our small X-ray collection, was contributed by the Kelley-Koett Manufacturing Co.

The medicinal-forms exhibit was the outstanding addition to the section of pharmacy. The display, a gift from Parke, Davis & Co., was designed by the curator and Mr. Avery and constructed by the Diorama Corporation of America. Its purpose is to show the great number of kinds of official medicines and the large variety of complicated special machines needed to produce medicines on a mass-production basis. Other gifts to the section of pharmacy were an early nineteenth century drug mill and two medicine chests, used by the Cobey family of Charles County, Md., from Mrs. Caroline Cobey Williams; an 1873 Enterprise drug mill and three sets of Hessian crucibles used in one of Colorado's first drug stores, from Lt. Col. Frank M. and Mrs. Gladys Daugherty; and official copy No. 343 of *The National Formulary*, eighth edition, from the American Pharmaceutical Association.

The most interesting addition to the section of *materia medica* was a special exhibit of essential oils presented by Dodge & Olcott, Inc. This exhibit was also planned by the curator and Mr. Avery, and constructed by the Diorama Corporation of America. It shows drawings of plants which yield volatile oils, specimens of the parts used, manufacturing scenes, and finally examples of finished oils.

Aeronautics.—The outstanding aeronautical accession for the year in point of historic importance is the collection of parts remaining of original gliders devised by John J. Montgomery between 1905 and 1911. The accession came from the University of Santa Clara, Calif., with the consent and cooperation of the Montgomery family. Montgomery's accomplishments in gliding were spread over several intermittent periods beginning in 1884 when he constructed and successfully operated a craft of tandem monoplane design which glided a distance of about 600 feet. His glider experiments over the period 1905–1911, which unfortunately were terminated by his fatal injury in a rough landing, included glider launchings from balloons, covering distances as much as 8 miles and landing at a predetermined spot; and many glides of long distances from natural elevations. The parts of the 1905 and 1911 gliders now accessioned are incomplete but are nevertheless important technical evidence of the materials and methods that Montgomery employed.

From the standpoint of relationship to air warfare and particularly to the devastating effect of bombing as practiced in World War II, the Norden bombsight that was used in directing the first atomic bomb dropped over Japan constitutes a very important accession. The presentation of this important piece of aeronautical equipment to the Museum was attended February 10, 1947, by high-ranking officers of the Army and Navy, Government representatives, and officials of the donor company, the Victor Adding Machine Co.

Another important accession, also related to World War II, is a series of 82 scale-model airplanes received as a transfer from the Navy Department. These are the identical models of enemy planes that were constructed within the restricted-shop areas of the Navy Department's Special Devices Division and the Technical Air Intelligence Center while the war was in progress. Details for their construction were obtained from films taken by our fighter planes in combat; photographs made during battle or by dangerous reconnaissance over enemy airfields; from the reports of spies; and from other sources often involving great danger and sacrifice. Dimensions were secured, often under fire, from actual specimens which had been shot down. Following the completion of each model it was posed against authentic projected backgrounds and in a series of attitudes of actual flight and photographed. The photographs thus obtained, as well

as lantern slides, were then dispatched to the front and to training centers, where they provided up-to-date information on enemy developments. It is interesting to report that one of the Naval officers engaged in this valuable war project is the present curator of the division.

Another war development by the curator was the Navy Target Kite. This differs from the conventional kite in that it is flown with two lines and is maneuverable. In the air it resembles an airplane in appearance as well as in performance and can execute loops, figure-eights, wide lateral swings, climbs and descents of any angle, and vertical dives. Its speed in the air is two to three times as fast as the prevailing wind. It provides a constantly moving target which requires skilled dexterity by the gunners to hit. These target kites were extensively used not only during basic gunnery training but also to maintain the alert efficiency of gunners aboard ship and in advanced areas. It was patented by the Navy and in the name of the inventor, who has donated a complete assembly kite and handling equipment to the collection.

Three recent types of aircraft are illustrated by other models received this year. They are an XFL-1 Bell "Airabonita," made and presented by Leroy McCallum. This is the Navy version of the Army's P-39 that was used so successfully in the war. An F-6-F Grumman "Hellcat" model represents one of the Navy's most successful fighter planes. This model was made and presented by the Navy Department's Bureau of Aeronautics Special Devices Division. The third model is the gift of United Helicopters, Inc., and shows a rotary-winged aircraft designed by Stanley Hiller, Jr., and named "Hiller-copter."

The extensive changes in organization and activities instituted at the beginning of the year, which affected particularly the divisions of engineering, crafts and industries, and aeronautics, respectively, involved a change in assignment of collections. There were made, therefore, during the year wholesale transfers of specimens between divisions, as follows:

From Engineering to Crafts and Industries-----	2,053
From Engineering to Aeronautics-----	3,311

Number of specimens under the department.—At the end of the year the total number of specimens in the department of engineering and industries was as follows:

Engineering-----	11,814
Crafts and industries-----	60,683
Graphic arts-----	48,610
Medicine and public health-----	22,588
Aeronautics-----	3,579
 Total-----	 147,274

INSTALLATION AND PRESERVATION OF COLLECTIONS

It is pleasing to report that the extensive organization changes had no adverse effect on the progress of the department's program of preservation and systematic arrangement of collections. As a matter of fact, the changes made it possible to begin new work on certain collections (food and agriculture) not previously included in the program. The work performed during the year is summarized under the various divisions.

Engineering.—Securing the southwest court of the Arts and Industries Building as a storage area is a start toward the more systematic arrangement of the collections. If required storage furniture is forthcoming this year, a substantial step can be made in carrying out the permanent plan for the classified storage of reference material.

Flooring and painting of rooms in the northwest basement have increased the usefulness of that space for reference collections. The laborer-assistant made excellent progress in the cleaning of the collections there.

The associate curator of the section of land transportation, Smith Hempstone Oliver, directed the successful restoration of a Franklin automobile of 1902 as a test of what could be accomplished by the Museum's service shops in this type of work. As a result, it is planned to undertake a similar restoration of another vehicle during the coming year. The preparator, Kenneth M. Perry, repaired and refinished the scale model of a Rolls Royce automobile of 1907.

The filing of the Cropley watercraft collection of memoranda and printed data has improved the condition and arrangement of the material. The task of titling, indexing, and mounting the Blakeley collection of early automobile photographs was also completed.

The rearrangement of space necessitated by the separation of the section of aeronautics required the moving and consolidating of collections contained in about 20 quarter units and more than 50 feet of shelving.

Crafts and industries.—From the hall of textiles, 170 specimens were retired from exhibition for preservation in storage. The Pepperell model depicting the manufacture of cotton sheeting was thoroughly cleaned and certain alterations made to bring it up to date. Comparable treatment was given to the exhibits of Scotch plaids, batik work, and linoleums.

In the section of manufactures most of the early part of the fiscal year was given to the newly acquired collections of mineral industries. This involved the restoration of numerous models relating to the coal, petroleum, glass, and iron industries; the repair and refinishing of the exhibition furniture and the reinstallation of the models and specimens in new locations. The division's preparators initiated new

work on the preservation of the animal products collection, which had been allowed to lapse owing to lack of personnel to carry any one project to completion, especially among stored materials.

Preservation procedure among the wood collections was confined mainly to the study materials. Several of the larger lots received prior to this year were inspected and fumigated, and the wood-storage room in the northwest basement was rearranged. The work of preparators and assistants in this division is highly commendable, especially when one considers how versatile they must be to perform duties for the four sections of the division, each with different problems.

Graphic arts.—The addition of a museum aide, appointed toward the close of the previous fiscal year, made it possible to forward preservation work this year to a considerable degree. About 400 prints were matted, including 60 large Audubons lithographed by Bien, and about 200 Dahlgreen etchings. Aside from filling in special collections already under way, 8 new cases, consisting for the most part of contemporary American prints and nineteenth-century French etchings, were added, making 43 cases in all. The seven traveling exhibits were cleaned, repaired, and rematted where necessary. These traveling shows are now in very good condition and are ready for further scheduling. The 99 Dahlgreen plates were placed in labeled jacket envelopes for better preservation and readier gathering of data.

Medicine and public health.—Periodical inspections were made and it is reported that only expected deteriorations through age are noticeable. Some chemical drugs, especially those subject to changes by deliquescence, and some of the pharmaceutical preparations affected adversely by exposure to light and temperature changes will be condemned or replaced by new specimens received from the original donors. All new vegetable drugs were fumigated before they were placed on display. Preserving solutions were changed periodically and from time to time insecticides were added to cases containing material subject to attack by insects. The collections are in a good state of preservation. New installations were made in the sections of public health, medical history, and pharmacy.

Aeronautics.—The department's lack of personnel during the war years to give direct attention to the aeronautical collections required the curator, Paul E. Garber, upon his return to the department to give as much attention as possible to this material. Many of the exhibited groups of objects were restored to proper condition. He began, too, the planning of aeronautical exhibits to be installed in the west south range of the Arts and Industries Building, an area made available through the removal of part of the mineral industries exhibitions. At the close of the year the transfer of specimens from the Aircraft Building to the Arts and Industries Building was partially under way.

Exhibition.—The special exhibitions arranged by the department this year included not only the long-established monthly shows of the graphic arts and photographic prints but also a number of unusual special displays of popular interest. The list of these follows:

"Preservation of the Nation's Treasures." A unit of the Smithsonian Centennial Exhibit.

Photographs of ships' figureheads from the collection of Pauline A. Pinckney. Annual exhibition of the Washington Ship Model Society.

Commemorative exhibits marking the centenaries of Thomas A. Edison and Alexander Graham Bell.

Transportation. A notable exhibition of the paintings of Peter Helck.

GRAPHIC ARTS

<i>Date</i>	<i>Exhibitor</i>	<i>Material</i>
June-July 1946	19th-century French etchers	Etchings and other prints.
August 1946	Contemporary American Etchers	Etchings and other prints.
September 1946	Francis R. Fast	29 finger paintings.
October 1946	Will Barnet	30 prints (various).
November 1946	Leonard Pytlak	40 serigraphs.
December 1946	Charles W. Dahlgreen	Etchings, drypoints, aqua-Smithsonian edition. tints.
January 1947	Russell T. Limbach	38 lithographs.
	Adolf Dehn	32 lithographs.
March 1947	Pietro Lazzari	26 drypoints.
April 1947	Paul Landacre	35 wood engravings.
May 1947	Menton Spruance	36 lithographs.
June 1947	Sam Thal	32 drypoints.

PHOTOGRAPHY

<i>Date</i>	<i>Exhibitor</i>	<i>Material</i>
July-August 1946	K. W. Gullers	209 pictorial photographs of Sweden.
September 1946	Frank T. Chesnut	49 pictorial photographs of Japan.
October 1946	Albert Greenfield	60 pictorial photographs of Latin America.
November 1946	Axel Bahnson	60 pictorial photographs of various subjects.
December 1946	James W. Bradley	40 pictorial photographs (various).
January 1947	Eastman Kodak Co.	31 dye transfer color prints.
February 1947	Frank Meister	50 pictorial photographs (various).
March 1947	Edward Weston	61 pictorial photographs (various).
April 1947	Eleanor Parke Custis	50 pictorial photographs (various).

May 1947-----	Justin N. Locke-----	50	pictorial photographs (various).
June 1947-----	The Washington Post-----	17	pictorial photographs (winning prints from local inter-high-school competi- tion).

INVESTIGATION AND RESEARCH

Research performed by the staff consists mainly in studying specimens in the collections and making brief searches of books, archives, and patent records in order to answer questions arising in the course of the work or in planning the development, preservation, and exhibition of the collections. This year, for example, there was made a study of textile specimens employed in the American Indian trade to determine proper name and technical description; and a special study of certain woods of Paraguay and Nicaragua to determine their properties and appropriate uses.

The department's greatest service both in variety and volume is that rendered to others by making available for examination and study its exhibited and study collections, files of illustrative material, and original data and libraries. This year, for example, the department aided outside investigators in the study of kayaks, research on the development of the typewriter, Japanese fingertip weaving, the identity of wood fibers in counterfeit Government checks, the study of seventeenth-century etchings, and research on motion picture developments. In every instance the pertinent Museum material was made available for intimate examination in association with a staff member.

Some examples of the assistance rendered by the staff to other Government agencies this year are: Information on wagons on the Utah centenary stamp desired by the Bureau of Engraving and Printing; Department of Commerce, information on the manufacture of machetes and records of monorail transportation systems; Library of Congress, bibliographic references to sources of ships' plans of historical vessels; National Archives, advice on preserving the late President Franklin D. Roosevelt's automobile at Hyde Park; identification of textiles, fibers, and woods desired by Navy, War Assets, Federal Housing, Commerce, Labor, and Agriculture Departments. Private individuals were assisted, too, in many ways such as obtaining photomicrographs of early frosted electric lamps in the collections for comparison with surfaces produced by new methods; comparing privately owned Audubon prints with those in the collections; and information on early American newspaper printing-plant operations to be used in a new theatrical production.

DIVISION OF HISTORY

(T. T. BELOTE, *Curator*)

THE work of the division of history during the year varied little in character from that of previous years. Considerable time was devoted to the preparation and installation of special exhibits, among them antiquarian and philatelic materials for the Smithsonian Centennial celebration, and Chinese coins belonging to the Honorable Kalgan Shih. The personnel situation was somewhat relieved during the year by the appointment of an additional assistant curator and a clerk-stenographer.

ACCESSIONS

Forty-five accessions were received as compared with 56 accessions last year. The number of specimens, however, was 3,539, only slightly less than the number of the previous year, 3,600.

Several interesting additions were made to the costumes collection. These included a waistcoat and knee breeches of mauve satin and a dark blue and white silk waistcoat worn by Simon Serre as a page boy about the middle of the eighteenth century in Cette, France. These objects were presented by Mrs. R. Vicarino. A child's dress and a pair of child's shoes of the period 1850 were presented by Miss A. Margaretta Archambault. A black silk dress of the period 1860 was presented by Miss Ella Crist. A trousseau of the period 1875 was presented by Miss Helen Fillyaw.

The most important permanent addition made to the costumes collection during the past year was a gift from Miss Mary Louisa A. Clement, of the dress worn in the White House by Mrs. John Quincy Adams during the period of the administration of her husband as President of the United States, 1825-1829. This dress is made of white satin with a silk tulle overdress and is trimmed with silver braid. The bell skirt and short Empire bodice of the dress make it a good example of the style of the period.

The military collections were increased by the gift of military chapeaux, epaulets, sash, coat, and trousers of the first quarter of the nineteenth century, all of which were presented by Dr. T. B. Pedrick. Maj. Jerome Clark presented a United States Army pay department officer's sword of the period 1850-1889. A United States Marine Corps officer's sword of the early part of the twentieth century was presented by Col. Paul A. Capron. The military collections also received two

Chinese scrolls that were presented to Gen. James H. Doolittle in commemoration of the American air raid on Tokyo in 1942. One of these scrolls was presented to the Smithsonian Institution by General Doolittle and the other was lent to the National Museum by the War Department.

The memorial collections were increased by the gift of a gold medal awarded to George F. Robinson by the Congress of the United States in 1871 in recognition of his services in saving the Hon. William H. Seward, then Secretary of State for the United States, from death by assassination in 1865. This medal was presented by Mrs. Myrtle Robinson.

From the White House there was transferred to the National Museum and assigned to the division a passenger elevator that was installed in the White House in 1902. The paneling in the interior of this historic elevator is made of quartered American oak, a portion of which came from the roof trusses of the Old South Church, Boston, Mass. The division has for a long period been in possession of a number of large pieces of furniture used in the White House during the entire period from 1860 to 1937. It will now be possible to group these objects around the elevator in such a manner as to constitute an effective and impressive museum unit relating to the history of the White House.

The numismatic collection was increased by 30 specimens of United States bronze, nickel, and silver coins struck in 1946 at the United States mints in Denver, Philadelphia, and San Francisco. These coins were transferred from the Bureau of the Mint of the Treasury Department. A collection of nearly 400 pieces of German paper currency of the period of the First World War was presented by Mrs. Anna Cote.

The most important addition to the philatelic collection was a sheet of fifty 3-cent Smithsonian Centennial commemorative stamps, formally presented to the Institution through Dr. Alexander Wetmore, Secretary of the Institution, by the Post Office Department, which was represented on this occasion by Third Assistant Postmaster General Joseph J. Lawler. In addition to the sheet of stamps the philatelic collection was increased by 2,985 specimens, or 1,280 more than last year, an increase accounted for in large part by the resumption of the mails at the end of the war. Of the total, 2,922 were transferred to the Museum from the Post Office Department.

Number of specimens under the division.—At the end of the year the total number of specimens under the care of the division of history was as follows:

Art	1,644
Civil	16,325
Military	28,189
Naval	3,108
Numismatic	51,470
Philatelic	420,497
Pictorial	16,978
 Total	 538,211

INSTALLATION AND PRESERVATION OF COLLECTIONS

The preservation of the various objects comprising the costumes section is one of the largest tasks that confronts the division because of the perishable nature of the materials of which costumes are made. During the past year the job of labeling all the costumes in the section with cloth tape marked in indelible ink and sewed into the specimen was inaugurated, and this work was kept up to date as new specimens were added.

The textile materials in the care of the military and naval sections were carefully examined and treated for protection against insects.

Cataloging.—The cataloging of a large collection of military and naval material received the previous year was completed this year. This was the only cataloging done except in connection with the acquisition of new specimens, and such work was kept fairly current.

When more clerical help becomes available it will be possible to keep up to date the four phases of cataloging that have received the attention of the clerical staff since the establishment of the division: (1) The preparation of a list of the specimens included in an accession as soon as the accession has been completed; (2) the entry of these lists in the catalogs; (3) the entry of similar records in the card catalog files; (4) the preparation of special catalogs of various types of historical materials in accordance with the intrinsic and historical character of the material. Progress in the first two categories may be considered reasonably satisfactory. Work on the third group is considerably in arrears, and little has been done to date on the fourth.

Exhibition.—In connection with the celebration of the Smithsonian Institution Centennial in August 1946, the members of the staff prepared a special exhibit of antiquarian materials, which was shown in the foyer of the Natural History Building. The exhibit included arms, costumes, coins and medals, and miscellaneous materials relating to the careers of noted Americans. The arms included a blunderbuss and a coach gun of the seventeenth century, a pair of breech-loading flintlock pistols of the eighteenth century, and a large and heavy pair of dueling pistols of special make owned by Gen. Andrew Jackson. The

costumes included two ornate and colorful women's costumes of the eighteenth century and a number of large pieces of costume jewelry of the period of the nineteenth. Other objects of social interest included in this exhibit were a very handsomely carved oak chest of the period of the eighteenth century and some exceptionally fine and ornate pieces of armorial chinaware of the early part of the nineteenth century. The coins and medals shown in this connection included a number of rare gold doubloons and silver "pieces of eight," and a number of gold medals and decorations awarded to Samuel F. B. Morse in recognition of his scientific achievements.

A special exhibit of philatelic materials also was prepared by Mrs. Catherine L. Manning, philatelist, for the Centennial celebration and shown in the rotunda of the Arts and Industries Building. This display consisted of: A die proof of the 3-cent stamp issued by the Post Office Department in commemoration of the Centennial; a photograph of the north view of the Smithsonian Institution made by Floyd B. Kestner, photographer, which was used in designing the stamp; a sheet of 50 Smithsonian stamps autographed by Postmaster General Hannegan, and a photograph of Third Assistant Postmaster General Joseph J. Lawler presenting an autographed sheet of the stamps to Dr. Wetmore, Secretary of the Institution; 14 first-day covers with interesting cachets addressed to officials of the Institution; and an article on the Government postage stamp collection published in *Philately* of August 5, 1946. Other cases contained rare and historical United States and foreign stamps and historical covers.

In March 1947 a special exhibition of Chinese gold, silver, and bronze coins of the late nineteenth and early twentieth centuries was held in the foyer of the Natural History Building under the joint auspices of the division of history, the Washington Numismatic Society, and the American Numismatic Society. The coins were the property of the well-known Chinese coin collector and expert numismatist, the Honorable Kalgan Shih, of Kunming and Shanghai, who visited Washington during the week of the exhibition.

An exhibition of unusual importance was installed during the year in the rotunda of the Arts and Industries Building. This consisted of five large screen cases filled with typical American military swords of the period 1776-1946.

Plans have been made to install a large collection of military and naval insignia of the period of World War II in a series of frames that will make their examination by the public much simpler, and that will preserve the collection from dirt and deterioration.

INVESTIGATION AND RESEARCH

Despite the unusual claims upon the curator's time during the year, progress was made in the preparation of a manuscript on "The History and Heraldry of the Flags of the United States." The curator also continued his study of the history of coins and medals from the period of their first production to the present time. The associate curator, Charles Carey, continued his study of the development of military and naval uniforms and firearms. He also prepared photographs of rifles to be used by the Military Service Publishing Co. in a manual to be used by the War Department in training members of the R. O. T. C. Assistant Curator Margaret W. Brown (museum historian) made satisfactory progress on a manuscript that she is preparing on White House costumes. Mrs. Catherine L. Manning, assistant curator (philately), was of considerable assistance to several Government departments and to philatelists and philatelic periodicals in searching for information on and furnishing photographs of historical stamps. On May 12 Mrs. Manning read a paper on the Government collection of postage stamps at the Philatelic Centenary Exhibition in New York. Considerable research was done by all members of the scientific staff for the preparation of replies to requests for information.

The curator participated in a series of conferences with various officials of the National Park Service in connection with the preparation of a series of pictures of United States historic flags in one of the museum rooms located in Fort McHenry, Baltimore, which is under the direction of the National Park Service. For the purpose of this exhibit a series of photographic prints of historic flags was furnished to the officials of the National Park Service. The curator also rendered the usual amount of assistance to the Treasury Department in the field of numismatics and the associate curator assisted the War and Navy Departments in the field of military and naval relics. Mrs. Manning assisted the Post Office Department in the field of philately.

ACCESSIONS DURING THE FISCAL YEAR 1946-47

(Except when otherwise indicated, the specimens were presented or were transferred, in accordance with law, by bureaus of the Government)

ABBOTT, R. T. (See under Navy Department, Naval Medical Research Unit No. 2.)

ABBEY FUND, W. L., Smithsonian Institution: 1,758 bird skins, 10 bird skeletons; 1 mammal skin and skull; plants; mollusks, amphibians, collected by M. A. Carriker in Santa Marta, Colombia (171490); 540 bird skins from India collected by S. Dillon Ripley on Smithsonian Institution-Yale University Expedition (174333); 453 bird skins, 2 birds in alcohol, 2 bird nests, 2 sets of eggs and 7 bird skeletons; 8 insects; 10 fishes; 10 mollusks; 7 shrimps; 16 mammals (8 skins and skulls and 8 in alcohol) collected by Dr. A. Wetmore and W. M. Perrygo in Panama, March-April 1947 (174861); 318 birds collected in India by Sálim Ali (174905); 238 birds from India (175937).

ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA, Philadelphia, Pa.: Paratype of an insect (176366); (through R. M. de Schauensee) 2 birds (175376, exchange).

ACADEMY OF SCIENCES OF U. S. S. R., Moscow, U. S. S. R.: (Through E. L. Krinov) 5 meteorites from the U. S. S. R. (173081, exchange).

ACKERLY, ERNEST, Athens, Ga.: 9 amphipods from White River Cave near Rockmart, Ga. (175310).

ACOSTA-SOLIS, DR. M., Ann Arbor, Mich.: 642 grasses from Ecuador (174315).

ADAMS, DR. C. F., Jefferson City, Mo.: Several parasitic worms (173991); 1 fly from Peru (175780).

AGRICULTURE AND FORESTRY, DEPARTMENT OF, Pretoria, Union of South Africa: (Through Dr. H. K. Munro) 4 flies from Mukuzi, Zululand (175017, exchange); 68 grasses from South Africa (175327, exchange).

AGRICULTURE EXPERIMENT STATION, Lexington, Ky.: (Through Dr. Paul O. Ritcher), 32 larvae and 4 adult beetles in 8 species (174866).

AGRICULTURE, U. S. DEPARTMENT OF, Washington, D. C.: (Through Jason R. Swallen) 5,500 grasses collected by Mr. Swallen in Brazil on a cultural-relations project of the State Department (175451).

Bureau of Entomology and Plant Quarantine: Collection of amphipods from Texas (173187); 5 mollusks from Mozambique and 1 planarian from Brazil (173673); 18 lizards and 1 toad collected in a South Pacific island by Dr. H. K. Townes, Jr., in 1946 (174398); type specimen of a new species of mite from India (173658); 2 lizards from Truk Atoll, Caroline Islands, collected by Dr. H. K. Townes (173804); 2 mollusks from Portland, Oreg. (173912); 14 mollusks from Rota Island and 2 lizards from Tinian Island (173939); (through Dr. Paul W. Oman) 20 mollusks from Lebanon, Pa., collected by Henry H. Early (174701); 30 mollusks from Wooster, Ohio (174949); (through L. J. Bottimer) 57 Solpugida and scorpions, collected by O. G. Babcock (175443); 4 mollusks from Portland, Oreg. (175983); 3 land shells from Guatemala and Venezuela (176173); (through C. F. W. Muesebeck) 26 snails (176216); approximately 65,000 miscellaneous insects retained from lots of specimens received for identification during 1946-47 (176327).

Bureau of Plant Industry, Soils, and Agricultural Engineering: (Through Dr. F. J. Hermann) 8 grasses from Texas and Mexico and 241 grasses collected in Chile by E. Barros (175091), 176068); (through R. J. Seibert) 184 rubber plants from Peru and Bolivia (175191); (through Joseph Ewan) 3 plants (176269); 37 grasses collected in Brazil by Dr. W. A. Archer (174724); 3 grasses collected by F. Barkley (174725).

Forest Service: 75 plants from Scandinavia (174856); (through W. A. Dayton) 1 plant from Oregon; 7 specimens of trees from Central America; 4 photographs of 3 new species of cacti (173497, 174010, 176069).

Office of Foreign Agricultural Relations: 1,500 specimens of bamboos

from the United States and tropical America (176410).

Soil Conservation Service: (Through Dr. F. J. Crider) 27 grasses (175269).

ALABAMA POLYTECHNIC INSTITUTE, Auburn, Ala.: (Through T. H. Rogers) 1 plant from Alabama (173322).

ALBANY MUSEUM, Grahamstown, South Africa: 65 mollusks from north of the Bashee River mouth, South Africa (174605).

ALBERTO, Brother Tomás, Salamina-Caldas, Colombia: 42 plants from Colombia (173764).

ALCALÁ, Raúl Pérez, Turrialba, Costa Rica: 213 insects from the region of Turrialba (174586).

ALCOA MINING Co., Ketchikan, Alaska: 1 Silurian coral from Kosciusko Island, southeastern Alaska (175301).

ALDRICH, Dr. JOHN W., Washington, D. C.: 307 mollusks (176290).

ALGERIA, GOVERNMENT OF, AGRICULTURE DEPARTMENT, *General Entomology*, Algiers, Algeria: 100 insects (175349).

ALICATA, Dr. J. E., Honolulu, Hawaii: 24 mollusks from Guam and Ponape Islands (174827).

ALLAIRE, WOODWARD & Co., Peoria, Ill.: Samples of Bryonia, N. F., and Matriaria, N. F., for the *materia medica* collection (173921).

ALLARD, H. A., Arlington, Va.: 600 plants from Virginia (171967); 1 short-tailed shrew from Bull Run Mountain, Va. (175025); 189 plants from West Virginia (174820); 568 plants from Maryland and Virginia (175713, 175982).

ALLARD, HOWARD, Ciudad Trujillo, Dominican Republic: 29 plants from the Dominican Republic, collected by the donor (174473).

ALLARDICE, Mrs. JESSIE D., Providence, R. I.: 2 pairs of roller skates made by Samuel Winslow Manufacturing Co., Worcester, Mass., about 1880 and used in exhibition skating by W. M. Drown and his daughter Jessie Darling Drown; also a small advertising circular announcing the appearance of the skaters at the opera house (175616).

ALVÁREZ, Dr. José. (See under *Escuela Nacional de Ciencias Biológicas*.)

AMERICAN AIRLINES SYSTEM, New York, N. Y.: Set of double seats from Douglas DC-3 airplanes (176384).

AMERICAN EXPORT LINES, INC., New York, N. Y.: A scale model of the S. S. *Excalibur* built in 1890 and lost in World War II while serving as an Army attack transport (174264).

AMERICAN HOSPITAL ASSOCIATION, Chicago, Ill.: 92 transparencies illustrating the subject of hospitalization (174858).

AMERICAN MUSEUM OF NATURAL HISTORY, New York, N. Y.: 5 fishes from Mexico (174207); (through Dr. C. H. Curran) 4 flies (175372); (through Dr. Charles M. Breder, Jr.) 26 pipefishes from south of Palmetto Key, Pine Island Sound, Fla., July 6, 1940 (175468); (through Dr. J. T. Nichols) 1 fish (173710, exchange); (through Dr. John T. Zimmer) 1 wren (173999, exchange); (through Dr. Mont A. Cazier) 2 beetles (174694, exchange).

AMERICAN PHARMACEUTICAL ASSOCIATION, Washington, D. C.: 1 copy of the *National Formulary*, 8th edition, 1946 (official copy No. 343) (175347).

AMERICAN VISCOSA CORP., New York, N. Y.: 2 kits illustrating the manufacture of rayon from wood and cotton by the viscose and acetate processes (174829).

ANDERSON, Dr. C. L. G., Washington, D. C.: A bow and 18 arrows collected by the donor from the Lacandone Indians in Chiapas, Mexico, in 1905 (174437).

ANDERSON, EDWIN, Lima, Peru: 35 grasses from Peru (173626, 174165).

ANDERSON, G. C. (See under *General Electric Co.*)

ANDERSON, Dr. R. W. (See under *Botanic Gardens*, Sydney.)

ANNEREAUD, RALPH F., Sacramento, Calif.: Type specimens of 5 species of helminths (175266).

ANONYMOUS: First installment (80 pieces) of a large collection of American historical Staffordshire china (171126); collection of Melanesian bows, arrows, feather wands, and scoops from New Guinea, received during the summer of 1946 (172214); skeleton of 9-months-old male Negro, with accompanying brain (173660); specimen of tufted guineafowl (174011); 2 brains of American Negro children, 1 accompanied by skull and skeleton (175126).

APOLINAR-MARÍA, Rev. Brother, Bogotá, Colombia: Plant from Colombia (175619).

ARCHAMBAULT, A. MARGARETTE, Middleburg, Va.: A small child's dress made in 1850 out of linsey-woolsey material and a pair of shoes worn with the dress made with leather toes and plaid cloth top (176129).

ARCHER, Dr. W. A. (See under *Instituto Agronomico do Norte*.)

ARELLANO, Ing. A. R. V., Mexico, D. F.: 52 land and fresh-water shells (174440).

ARGUS, INCORPORATED, Ann Arbor, Mich.: (Through Homer Hilton) 1 Argus A2

camera, 1 Argus C3 camera, 1 Argoflex model E camera, and 1 Argus PA projector (174969).

ARIZONA, UNIVERSITY OF, Tucson, Ariz.: 39 grasses from Arizona (173433, 174103, exchange); 241 plants from Arizona (173490, exchange); (through Dr. Walter S. Phillips) 23 ferns from Arizona (173429, 175121, exchange); (through G. Thomas Robbins) 55 plants from Arizona (173835, exchange); (through Dr. L. M. Pultz) 1 plant from Mexico (175475); (through Prof. Robert A. Darrow) 8 grasses (176024, exchange); (through Dr. Stuart H. Perry) 5 meteorites, viz., slices from Cruz del Aire, Mexico, Silver Bell, and Wallapa from Arizona, and Glorieta Mountains, N. Mex., and one unidentified (176209, exchange).

ARMENIA, BOTANICAL INSTITUTE OF ACADEMY OF SCIENCES OF, Erevan, U. S. S. R.; 100 plants from Armenia (175543, exchange).

ARMOUR LABORATORIES, Chicago, Ill.: 5 colored illustrations from drawings of Dr. Frank Netter entitled "Medical Life, the Human Side of a Physician" (174469).

ARNETT, Dr. Ross. (See under Estate of E. D. McDonald.)

ARNOLD, Dr. GEORGE. (See under Southern Rhodesia National Museum.)

ARNOLD, LILLIAN E. (See under University of Florida.)

ASCHMEIER, C. R., Washington, D. C.: 1 red-fox skull from Middleburg, Va. (174818); skull of 1 black bear from Mount Tabor, Vt. (176153).

ASSOCIATED PHOTO PRODUCTS, New York, N. Y.: 1 Lektro motion-picture camera with case and battery (174907).

AZIM, Dr. M. ABDEL, Cairo, Egypt: 37 fresh-water snails from Cairo (174913).

BABCOCK, WILLIAM, Westfield, N. J.: U. S. Army pay department officer's sword and scabbard of the period 1851-1889, and a sword and scabbard owned by Gen. Miguel Miramon, of the Mexican Army, in 1863 (151409).

BAER, Mrs. MARY ARNOLD, Washington, D. C.: Linen damask napery with pictorial pattern, commemorating the "Nativity" and "The Lord's Supper" (173563).

BAERG, W. T. Fayetteville, Ark.: 1 leech (173453).

BAHOVEC, FRED, Baranof, Alaska: 2 mollusks from Warm Springs Bay, Baranof (173733).

BAHNSEN, AXEL, Yellow Springs, Ohio: 60 pictorial photographs for special exhibition during November (174461, loan).

BAILEY HORTORIUM, Ithaca, N. Y.: (Through Dr. P. A. Munz) 195 plants (173495); (through Dr. L. H. Bailey) 1 plant from the West Indies (175620, exchange).

BAILEY, DR. L. H. (See under Bailey Hortorium.)

BAILEY, DR. REEVE M. (See under University of Michigan, Museum of Zoology.)

BAISAS, DR. F. E. (See under Philippine Republic, Bureau of Health.)

BAJKOV, DR. ALEXANDER D., Dayton, Ohio: Sample of diatomaceous earth from Nevada (174459).

BAKER, ROGER C., Fayetteville, Ark.: 85 Mississippian goniatites from the vicinity of Fayetteville (175442).

BAKER, ROLLIN H., Eagle Lake, Tex.: 1 Norway rat (173866).

BALDWIN, DR. J. T. (See under Blandy Experimental Farm and College of William and Mary.)

BALES, DR. BLENN R. (deceased), Circleville, Ohio: 48 land shells, Cerions, from the Florida Keys (176287).

BALL, DR. CARLETON R., Washington, D. C.: 10 plants from Maryland and Pennsylvania (176369).

BARBER, H. G., Roselle, N. J.: 3,485 bugs (176212).

BARBEE, H. G., and DR. S. C. BRUNER, Roselle, N. J.: 17 bugs, comprising the type of one species and the type, allotype, and 14 paratypes of another (174144).

BARE, PROF. O. S. (See under University of Nebraska.)

BARLOW, HELEN, London, England: (Through the Department of State) An oil painting of Young Omawhaw, War Eagle, Little Missouri, and Pawnees, executed by Charles Bird King in 1821 at Washington, D. C. (173719).

BARNEBY, RUPERT C., Wappingers Falls, N. Y.: 4 plants from Western United States (175711).

BARNÉS, VENTURA, JR., Mayagüez, Puerto Rico: 24 bird skins from Venezuela (174904).

BARNES, DR. VIRGIL E. (See under University of Texas, Bureau of Economic Geology.)

BARNET, WILL, New York, N. Y.: 30 prints by Will Barnet for special exhibition during October (174354, loan).

BARNETT, LT. HERBERT C., Fort Sam Houston, Tex.: 1 roach (176145). (See also under War Department, Army Medical Department Schools.)

BARRETT, CHARLES H. M., Washington, D. C.: 1 insect collected in Newfoundland by Peters and Burleigh (173642).

BARRO, MANUEL, Habana, Cuba: 72 beetles (175481).

BARTLETT, Prof. H. H., Ann Arbor, Mich.: 1,067 plants from South America (175115).

BARTLEY, FLOYD, Circleville, Ohio: 40 plants from Ohio (175112).

BARTRAM, EDWIN B., Bushkill, Pa.: 13 ferns and lower cryptogams from the Dominican Republic (174798, exchange).

BARTSCH, Dr. Paul, Washington, D. C.: 2 mollusks from Virginia (173485).

BAYER, FREDERICK M., Washington, D. C.: 8 mollusks from Biak Island, Netherlands East Indies (173957); 2 plants from Okinawa, Liu Kiu Islands (173706); 4 insects (174088); 3 plants cultivated from seeds grown in New Guinea (174726); 3 brittlestars from Soldier Key, Fla. (175783); 33 amphipods, 1 chaetognath, 4 isopods, 1 shrimp, 1 worm, and 3 anomurans (175965); 19 fishes from Biak, Netherlands East Indies, collected by donor in 1945 (176304).

BAYS, LEWIS, FPO, San Francisco, Calif.: Atomic-bomb test envelope with special cachet from U. S. S. *Appalachian*, at Bikini Atoll (173633).

BEAMER, Dr. R. H. (See under University of Kansas.)

BEAN, Dr. ROBERT BENNETT (deceased), New Orleans, La.: Skulls (including cervical vertebrae) of two adult male Negroes, and accompanying brains (173661).

BEATTY, HARRY A., St. Croix, V. I.: 1 bird (174504).

BECK, ROLLO H., Planada, Calif.: 40 red-winged blackbirds (175457).

BEEBE, Dr. WILLIAM, New York, N. Y.: 9 fishes from Rancho Grande, Venezuela (174226). (See also under New York Zoological Society.)

BEHRE, Dr. ELLINOR H., Baton Rouge, La.: 7 marine invertebrates, holothurians, and pieces of wood with borings (173952); 145 marine invertebrates, echinoderms, and 19 fishes (174366).

BELL, ROBERT E., Chicago, Ill.: 15 flint specimens from the agatized dolomite quarries north of Amarillo, Tex., collected at an aboriginal quarry site on Bivins Ranch, south side of Canadian River, about 36 miles northeast of Amarillo (176237).

BELLON, GUSTAVE, Oaxaca, Mexico: (Through M. Flory) Tripod bowl from unknown ruin near Oaxaca (175634).

BENN, JAMES H., Washington, D. C.: 8 specimens of quartz conglomerate, saltpeter ore, gypsum incrustations, magnesite, serpentine, etc., from Virginia, West Virginia, and Maryland (176285).

BEQUAERT, DR. JOSEPH. (See under Harvard University, Museum of Comparative Zoology.)

BERG, DR. CLIFFORD O., Ann Arbor, Mich.: 19 specimens of a new species of fly, including holotype, allotype, and paratypes (173657); 17 named flies from Guadalcanal (174447).

BERGER, MRS. T. E., and MRS. J. W. SHEPHERD, Washington, D. C.: 1 rare plant, third representative of the species in the National Herbarium, taken from a bouquet at a reception, February 14, 1947 (175391).

BERN, HOWARD A., Los Angeles, Calif.: Approximately 500 insects, mainly Lepidoptera and Coleoptera, collected by donor at Nadzab, New Guinea, during 1944 (173927).

BERNARD, FRANCIS, Algiers, Algeria: 273 ants from southern France and North Africa (173308, exchange).

BERRY, DR. S. STILLMAN, Redlands, Calif.: 4 mollusks, including 3 paratypes, from California and western Mexico (174049).

BETHEA, REV. JAMES EDWIN, Lexington, Va.: 193 mollusks (175361).

BEVAN, DR. ARTHUR. (See under Virginia Geological Survey.)

BIGGS, REV. H. E. J., Mellis, England: 72 mollusks from Iran and Egypt (173430).

BISHOP MUSEUM, BERNICE P., Honolulu, T. H.: 2 ferns from Hawaii (174465, exchange); (through Marie C. Neal) 1 plant from Hawaii (174191, exchange).

BIXLER, P. S. (See under W. E. Salter.)

BLACK, G. A. (See under Instituto Agroonomico do Norte.)

BLAKE, MRS. D. H. (See under Burdette White.)

BLAKESLEE, C. L., Pittsford, N. Y.: 2 mollusks from North River, Ala. (174752); 68 mollusks from New York and Indiana (174943); 18 mollusks from New York and Alabama (175027); 10 land shells from New York State (175083).

BLANDY EXPERIMENTAL FARM, Boyce, Va.: (Through Dr. J. T. Baldwin) 66 plants from Virginia (174205, exchange); 19 plants from South America (175107, exchange).

BLUM, DR. JOHN E., El Cerrito, Calif.: 9 beetles, including 4 paratypes (171907, exchange).

BOGUSCHE, DR. EDWIN R. (See under Texas College of Arts and Industries.)

BOHART, DR. RICHARD M., Davis, Calif.: 10 mosquitoes, comprising 2 new species from California, and 6 adults, 2 genitalia slides, and 2 larval skins (175528). (See also under Robert L. Ingram.)

BOMBAY NATURAL HISTORY SOCIETY, Bombay, India: (Through Dr. W. L. Jellison) 1 rat from Sai, Konkan, India (171919).

BOOTH, Dr. W. E., Bozeman, Mont.: 75 grasses from Montana (174046). (See also under Montana State College).

BORMANN, Dr. EMMA, Washington, D. C.: (Through Mrs. Grace O'Hara) 42 block prints by Emma Bormann for special exhibition, June 23 through July 27, 1947 (176368, loan).

BORMANN, Mrs. R., Long Beach, Calif.: 5 mollusks, including 2 paratypes, from California (174989).

BOROSINI, Dr. AUGUST von, Los Angeles, Calif.: Bronze plaque of Salomon August Andree, 3 photographs, map of Amsterdam with descriptive text by Strindberg, commemorating the Andree Arctic balloon ascent in 1897 (174408).

BOTANIC GARDENS, Sydney, New South Wales (Through Dr. R. W. Anderson) 50 plants from New South Wales (175331, exchange).

BOTANIC MUSEUM AND HERBARIUM, Brisbane, Queensland: 44 grasses from Australia (173925, exchange).

BOTTIMER, L. J. (See under U. S. Department of Agriculture, Bureau of Entomology and Plant Quarantine, and O. H. Graham.)

BOURGEOIS, MARIE E., Mixcoac, D. F.: 64 land shells from Mexico, including types of 3 new species, and 1 beetle (175133, 175137).

BOUSKA, JOSEF, Prague, Czechoslovakia: 6 crinoids from the Silurian of Czechoslovakia (175200).

BOVING, Dr. ADAM. (See under Dr. J. P. Kryger.)

BRADLEY, JAMES W., Atlanta, Ga.: 40 pictorial photographs for exhibition during December (174765, loan); 4 pictorial photographs titled "Blue Horizon," "Daughters of Coventry," "King of Clowns," and "Still Life in Carbro" (175322).

BRADY, MAURICE K., Washington, D. C.: 96 reptiles and amphibians from Colombia (174241).

BRANSON, Dr. CARL C., Alamogordo, N. Mex.: 100 Upper Devonian and Mississippian invertebrate fossils from the vicinity of Alamogordo (174086); 90 Pennsylvania gastropods (174470); 34 early Permian silicified gastropods from New Mexico (174686); 33 Lower Permian gastropods and one slab with silicified fossils from Otero County, N. Mex. (174687); 35 blocks of silicified Permian fossils and 50 Permian invertebrates from New Mexico (174758); 11 blocks for etching and 350 assorted invertebrate fossils from the Lower Permian of New Mexico (175302); 30 limestone pieces containing silicified Permian fossils from New Mexico (175986).

BRATTON, Mrs. LESLIE C., Washington, D. C.: 4 baskets from the Aleutian Islands and 1 carved-ivory tobacco box from Alaskan Eskimo (174377).

BREDER, Dr. CHARLES M., Jr. (See under American Museum of Natural History.)

BRENKLE, Dr. J. F., Mellette, S. Dak.: 40 plants from the western United States (174433); 25 plants from the United States (175330, exchange); 210 plants from Guatemala (176074).

BREWER, J. W., Jr. (See under Department of the Interior, National Park Service.)

BRIDGE, Dr. JOSIAH, Washington, D. C.: 14 mollusks from the Marianas Islands (174914); 730 marine mollusks, 2 echinoderms, and 4 corals from Yap, Ponape (175682).

BRIDWELL, J. C., Falls Church, Va.: Archeological material collected by the donor in 1933 from Fairfax, Prince William, and Henry or Hanover Counties, Va. (174352).

BRIER, ROBERT M., Redlands, Calif.: 3 amphipods (174221).

BRIGHAM YOUNG UNIVERSITY, Provo, Utah: (Through Dr. Bertrand F. Harrison) 41 grasses from Utah (174359, exchange).

BRIGHT, F. W. (See under Smithsonian Institution.)

BRISTOW, FRANK B., Fairfax, Va.: 1 Ica Diaphot extinction type exposure-meter (174600).

BRITISH GOVERNMENT, *British Museum (Natural History)*, London, England: (Through J. F. G. Clarke) 531 specimens of Lepidoptera, of which 355 represent 184 species new to the collection and the remaining 176 represent 92 species previously unique or rare in the National collection (173865, exchange); 27 amphipods (174668, exchange); (through Dr. Ethelwynn Trewavas) 32 South American fishes including 6 paratypes and 1 cotype (175124, exchange); 4 bugs (175389, exchange); (through P. F. Mattingly) 31 specimens of mosquito material (175976).

Forest Products Research Laboratories, Aylesbury, England: 964 woods from British Honduras, Great Britain, India, Burma, Ceylon, Federated Malay States, Australia, New Zealand, Africa, and other localities (173907, exchange).

Geological Survey and Museum, London, England: 2 specimens in counterpart and 2 dental wax impressions of 1 brachiopod and 3 specimens of another from the Ordovician of England (153030, exchange).

Royal Botanic Garden, Kew, England: 86 grasses (174435, exchange).

BRITISH GUIANA DEPARTMENT OF AGRICULTURE, Georgetown, British Guiana: (Through Dr. H. N. Fraser) 34 grasses from British Guiana (174273).

BROCK, VERNON E. (See under Hawaiian Board of Agriculture and Forestry.)

BRODIE, D. A., Gore, Va.: 10 crinoids from Oriskany sandstone at Gore (174454).

BROOKS, Dr. F. G., Woodruff, Wis.: 97 fresh-water snails from Carroll Lake, Oneida County, Wis. (173988).

BROWN, Dr. IDA A., Sydney, New South Wales: 1 crinoid from the Devonian (Transverse) group of Michigan (175491, exchange). (See also under University of Sydney.)

BROWN, Mrs. THOMAS T., Northfield, Mass.: 83 specimens comprising primarily Sioux Indian materials and water-color sketches by H. Stieffel, collected by the late Lt. Col. D. H. Brotherton in 1880 and 1881 (173740).

BRUNER, Dr. S. C., Santiago de las Vegas, Cuba: 1 paratype of a fly (173622). (See also under H. G. Barber.)

BRYSON, H. A., Raleigh, N. C.: Specimen of hubnerite (tungsten ore) from near Townsville, N. C. (174816).

BUCHANAN, L. L. (See under Dr. Carl O. Mohr.)

BUCHHOLTZ, OTTO, Roselle Park, N. J.: 4 butterflies (174571).

BUGBEE, Prof. ROBERT E. (See under University of Rochester.)

BULLOCK, Dr. D. S., Angol, Chile: 600 miscellaneous insects and 2 flatworms, all from Chile (175861); 386 miscellaneous insects from Chile and Colombia (176162, exchange); digging-stick weights (?) and celts from 5 sites in the provinces of Malleco and Cautín, Chile, collected by donor (176298).

BURCH, Dr. THOMAS, Bethesda, Md.: 18 land mollusks from Guatemala (176241).

BURCHAM, L. T., Berkeley, Calif.: 52 plants (174727); 28 mollusks from Peleliu Island, Palau Islands (175514).

BURES, JOSEPH A., Baltimore, Md.: 11 shrews collected by the donor and Lt. Kenney at Lake Roland, Md., in the spring of 1941 (173815).

BURGESS, OTIS E. (See under Morse Instrument Co.)

BURKE, Lt. JOHN, U. S. N. R., Washington, D. C.: 7 mollusks from British Solomon Islands (172325).

BURT, Dr. CHARLES E. (See under Quivira Specialties Co.)

BUSS, IRVON O., Madison, Wis.: Skull of large dog (175702).

BUTLER UNIVERSITY, Indianapolis, Ind.: (Through Prof. J. E. Potzger) 57 grasses from Indiana and Maine (174311, 175411, 176049, exchange).

CABRERA, Dr. ÁNGEL L. (See under Instituto del Museo.)

CALDWELL, Dr. JOHN S., Circleville, Ohio: 112 bugs from Texas and Mexico (175425); 1 insect (176261).

CALIFORNIA ACADEMY OF SCIENCES, San Francisco, Calif.: 48 grasses from California (174024, exchange); 100 plants from the Sierra Nevada, Calif. (174720); (through John Thomas Howell) 2 grasses (176273, exchange).

CALIFORNIA, UNIVERSITY OF, Berkeley, Calif.: 264 plants (173491, exchange); 1 plant, isotype (175714, exchange); (through Dr. Lincoln Constance) 418 ferns from the Pacific Islands and Alaska (175820, exchange); (through Dr. Carl L. Hubbs) 704 fishes (172478).

Museum of Vertebrate Zoology: (Through Frank A. Pitelka) 19 bird skins from Eritrea and the Philippines (174830).

College of Agriculture, Davis, Calif.: (Through Dr. Lauren E. Rosenberg) 10 crustaceans (173908); (through R. Merton Love) 2 grasses (176170).

CALIFORNIA, UNIVERSITY OF (AT LOS ANGELES), Los Angeles, Calif.: 6 plants from Peru and the United States (173790, exchange); (through Elizabeth McClintock) 35 plants, mostly from California (175113, exchange); (through Elizabeth McClintock) 1 plant from Argentina (174308, exchange).

CALIFORNIA COMPANY, Lexington, Ky.: (Through William L. Effinger) 32 linguloid brachiopods and Cambrian samples from Lincoln County, Ky. (175300).

CALIFORNIA INSTITUTE OF TECHNOLOGY, *Kerckhoff Biological Laboratories*, Corona del Mar, Calif.: (Through Dr. G. E. MacGinitie) 1 sponge, 26 parasitic copepods, 232 euphausiids (174-788).

CAMPBELL, GUY, Corydon, Ind.: 4,300 Silurian and Devonian invertebrate fossils from the Falls of Ohio region,

Louisville, Ky. (174299) ; about 500 Devonian bryozoans and corals from the Indiana side of the Falls of the Ohio near Jeffersonville, Ind. (175-386).

CANADIAN GOVERNMENT, *Department of Agriculture, Division of Entomology*, Ottawa, Canada: 155 beetles representing 13 species (175661).

CANFIELD FUND, Smithsonian Institution: 1 piece of rough peridot, 103.40 carats, from the Red Sea, Egypt (174533) ; 3 specimens of coloradoite from Herald Mine, Sugarloaf, Colo. (175655) ; 1 specimen of tiemannite (massive) from Grube Charlotte Mine, Harz Mountains, Germany (175135) ; 4 samples of adamite from Ojuela Mine, Mapimi, Durango, Mexico (175182) ; 17 samples of azurite, malachite, aurichalcite, metahewettite, etc., from the Apex Mine, Washington County, Utah (175490) ; 1 specimen each of adamite and wulfenite from Mine Ojuela, Durango, Mexico (175796) ; 3 mineral specimens, 1 of emmonsite and 2 of mackayite, from McGinnity Shaft, Goldfield, Nev. (175931) ; 1 specimen each of schallerite from Franklin, N. J., and gadolinite from Slobrekka Quarry, Frigstad, Norway (175971) ; 2 amblygonite crystals from Plumbago Mountain, Newry, Maine (176-017) ; 7 uranium minerals from Ruggles Mine, Grafton, N. H. (176-021) ; 1 specimen of tephroite from Franklin, N. J. (176030) ; 1 specimen of gearksutite from Chancellor fluor-spar mine, Jamestown, Colo. (176036).

CAPRON, Col. PAUL ALLYN, Washington, D. C.: United States Marine Corps officer's sword used by Colonel Capron, U. S. M. C., during the first half of 20th century (173837).

CARBONELL, CARLOS, Montevideo, Uruguay: 450 Coleoptera representing 29 species, together with 175 Heteroptera and Homoptera (174518).

CARDENAS, Dr. MARTIN, Cochabamba, Bolivia: Cultivated plant from Cochabamba (173427) ; 83 plants from Bolivia (173763).

CARLANDER, KENNETH D., Minneapolis, Minn.: 3 bird skins and a small collection of mollusks from India (173455).

CARLETON COLLEGE, Northfield, Minn.: 2 Beardslee magneto-electric telegraph instruments, serial numbers 22 and 47, patented 1859 (175456).

CARNEGIE INSTITUTION OF WASHINGTON, *Department of Terrestrial Magnetism*, Washington, D. C.: Archeological, ethnological, and geological speci- ments, together with birds, barnacles, and a mollusk, 140 specimens in all, collected by staff members of the department during various voyages of the nonmagnetic ship *Carnegie*, under the command of the late Capt. J. P. Ault (174353).

CARNEGIE MUSEUM, Pittsburgh, Pa.: A painting of Calbraith Perry Rodgers, aviator who accomplished the first flight across the North American Continent, New York to California, 1911 (175420) ; 5 thin sections and 28 specimens of Bryozoa from the Devonian of New York (175509, exchange) ; (through W. E. Clyde Todd) 25 birds from Venezuela (176150).

CAROLINA INDUSTRIAL PLASTICS CORP., Mount Airy, N. C.: 5 6-inch lengths and 1 50-foot hank of Chemclad plastic cordage (175630).

CARR, Dr. A. F., Jr., Tegucigalpa, Honduras: 32 crabs and 17 shrimps (176358).

CARROLL DUNHAM SMITH PHARMACAL Co., New Brunswick, N. J.: (Through Carroll Dunham Smith) 7 hand-made vials used in 1844 by John T. S. Smith, founder of the company (174126).

CARVALHO, Dr. Jose C. M., Rio de Janeiro, Brazil: 21 bugs representing 9 species and including 1 paratype (173791, exchange).

CASANOVA, RICHARD L., Curundu, Canal Zone: 1 gastropod and 2 corals from the Tertiary of the Canal Zone (174303).

CATHOLIC UNIVERSITY OF AMERICA, Washington, D. C.: (Through Dr. E. G. Reinhard) 1 parasitic copepod with nauplii (172182).

CAZIER, Dr. MONT A. (See under American Museum of Natural History.)

CENDRERO, Dr. ORESTES, Caracas, Venezuela: 5 mollusks from Venezuela (173879).

CHAPIN, Dr. E. A. (See under Smithsonian Institution, National Museum, collected by members of the staff.)

CHAPMAN, J. T., Orange, Va.: 1 quartz crystal from near Woods Mountain, and sample of placer sand from Booker Gold Mine, Buckingham County, Va. (174594).

CHAPMAN, R. M., Washington, D. C.: 96 plants collected in Alaska (175329, 175981).

CHAPMAN, R. M., and ROBERT E. FELLOWS, Washington, D. C.: 36 plants from Anaktuvuk River Valley, Alaska (172324).

CHASE, VIRGINIUS, Peoria Heights, Ill.: 100 plants from Illinois (174699).

CHAVAN, Dr. A., Nanterre (Seine), France: 8 Tertiary fossil mollusks from Morocco (174685).

CHESNUT, FRANK T., Trenton, N. J.: 49 pictorial photographs of Japan for exhibition during September 1946 (173810, loan).

CHICAGO, BURLINGTON & QUINCY RAILROAD, Washington, D. C.: 1 each, 1-inch sections of 112-pound and 129-pound Torsion-Resisting (TR) rail developed by Chief Draftsman George R. Burkhardt of the C. B. & Q. Railroad (174164).

CHICAGO, UNIVERSITY OF, *Walker Museum of Paleontology*, Chicago, Ill.: (through Dr. J. Marvin Weller) 4 Mississippian brachiopods and 49 specimens of Paleozoic Bryozoa, including 29 holotypes and 12 paratypes (175508, exchange).

CHICAGO NATURAL HISTORY MUSEUM, Chicago, Ill.: 1,359 plants collected in Venezuela and Ecuador by Dr. Julian A. Steyermark (173425, 173545, 173796, 174,731, 174808, 175358, 175359); 48 plants (173489); 28 miscellaneous plants from the Hawaiian Islands and the United States (173493); (through Loren P. Woods) 4 paratypes of fishes from Guatemala (174263); (through John W. Winn) 15 paratypes of fishes from Lake Managua, Managua, Nicaragua (174505); (through Dr. Steyermark) 270 grasses (175088); 3 plants from Hawaii (175122); 78 plants from Missouri (175333); 2 photographs of plants (175593). (All exchanges.)

CHICOPEE MANUFACTURING CORP., New York, N. Y.: 20 samples of "Lumite" fabrics woven of Saran. (174944, 175344).

CHICOPEE SALES CORP., New York, N. Y.: 10 specimens of "Lumite" fabrics, woven of Saran (174053).

CHUPP, CARL B. (See under United-Carr Fastener Corp.)

CHURCH, Prof. GEORGE L., Providence, R. I.: 1 grass from California (176266).

CHURCHILL, WARREN, Minocqua, Wis.: Approximately 100 fresh-water mollusks from Wisconsin (176040).

CLAGHORN, Mrs. CONSTANCE I., Cabin John, Md.: (Through Ruel P. Tolman) 24 copper and zinc plates etched by Joseph C. Claghorn (176289).

CLARK, ALEX, Casper, Wyo.: (Through Dr. W. P. Woodring) 24 Pliocene fossils from the Santa Maria district, Calif., including the type of a new species (174350).

CLARK, AUSTIN H. (See under Capt. Frank N. Young.)

CLARK, Maj. JEROME, Falls Church, Va.: United States Army pay department officer's sword of the period 1850-1889 (176210).

CLARKE, J. F. GATES, Washington, D. C.: 12 plants from western United States (173884, 174429). (See also under British Government, British Museum.)

CLARKE, LOUIS S., Palm Beach, Fla.: 1 Autocar tricycle built by Mr. Clarke in 1897 (175802).

CLAUSEN, DR. RÉNÉ, Le Tour de Peilz, Switzerland: 22 specimens representing 6 species of named ants from Switzerland (175797, exchange).

CLAUSEN, DR. ROBERT T., Ithaca, N. Y.: 21 plants (175629, exchange).

CLEMENS, MRS. MARY STRONG, Brisbane, Queensland: 91 grasses from Australia (174822).

CLENCH, WILLIAM J. (See under Harvard University, Museum of Comparative Zoology.)

CLOAKE, T. R., New York, N. Y.: A white muslin dress of the first decade of the twentieth century (174777).

CLOUGH, JOSEPH L., Tilton, N. H.: A surgical instrument known as a "bleeder," believed to have been used by Dr. Joseph Morrill Harper (1787-1865), a surgeon in the 4th U. S. Infantry, War of 1812 (176124).

COCKERELL, Prof. T. D. A., Boulder, Colo.: 100 insects, including type of 1 species and paratypes of 5 others (174199); 484 insects collected in Honduras (174937, 175479); 50 bees and miscellaneous insects, including 1 type and 18 MS. type species (176328).

COCKERILL, MRS. LILLIAN F., Sanibel, Fla.: 3 fresh-water mollusks from British Columbia (176122).

COLEGIO ANCHIETA, Nova-Frigurgo, Brazil: 8 grasses (175093, exchange).

COLLEGE OF AGRICULTURE, Mayagüez, Puerto Rico: (Through J. A. Ramos) 1 beetle from Puerto Rico (174775).

COLLEGE OF THE PACIFIC, Stockton, Calif.: (Through Robert Menzies) 1 slide of a trematode (174643).

COLORADO, UNIVERSITY OF, Boulder, Colo.: (Through Dr. Robert W. Pennak) 7 slides, representing 15 cotypes of new copepods (173106); (through Dr. William A. Weber) 71 plants (175821, exchange).

COLORADO COLLEGE, Colorado Springs, Colo.: (Through Prof. H. D. Harrington) Grass from Colorado (174312, exchange).

COMISIÓN DE BOTÁNICA, Cali, Colombia: 741 plants (175290, exchange);

(through Dr. J. Cuatrecasas) 8 plants (175712, exchange).

COMMERFORD, L. E., Washington, D. C.: 1 bird (174351).

COMSTOCK, Dr. JOHN A. (See under Los Angeles County Museum of History.)

CONANT, Dr. ROGER, Philadelphia, Pa.: 2 crabs from Florida (176001).

CONKLIN, JESSE, Stony Point, N. Y.: Plant from New York (174396).

CONSERVATION, DEPARTMENT OF, Montgomery, Ala.: (Through Francis X. Lueth) 6 muskrats from Mobile Bay Delta, Ala. (175732).

CONSTANCE, Dr. LINCOLN. (See under University of California.)

COOKE, Dr. C. WYTHE. (See under W. W. Naramore.)

COOPER, Dr. BYRON N., Blacksburg, Va.: A rare and unusual trilobite from the Ordovician of Virginia (174373).

COOPER, Dr. G. ARTHUR, and Dr. ALFRED R. LOEBLICH, Jr., Washington, D. C.: Approximately 50 Ordovician fossils from Maryland (174037). (See also under Dr. A. R. Loeblich, Jr., and Smithsonian Institution, National Museum, collected by members of the staff.)

COPELAND, Lt. ROBERT A., Jr., F. P. O., San Francisco, Calif.: 10 plants from the Philippine Islands (171305).

CORD, Sister MARY, Maryknoll, N. Y.: 22 mollusks from León, Nicaragua (173470).

COREY, Dr. ANDREW V. (See under Foreign Economic Administration.)

CORNELL UNIVERSITY, Ithaca, N. Y.: (Through Dr. Henry Dietrich) 18 insects (176261, exchange).

COSTA LIMA, Dr. A. DA. (See under Escola Nacional de Agronómica.)

COTE, Mrs. ANNA, Washington, D. C.: (Through Robert A. Elder, Jr.) 395 specimens of foreign paper currency (175975).

COTTON-TEXTILE INSTITUTE, INC., New York, N. Y.: 31 specimens of cotton textiles produced by American manufacturers for the spring and summer of 1947 (175609).

COTTRELL, R. E., Houston, Pa.: Samples of damson plum, common quince, and devils-walkingstick woods (175533, exchange).

COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH, Cronulla, New South Wales: (Through Dr. Ian S. R. Munro) 108 Australian atherinid fishes (172498, exchange).

COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH, Canberra, Australia: 64 grasses from Northern Territory, Australia (174148, exchange).

CRAIGHEAD, FRANK C., Washington, D. C.: 61 fishes, 6 mollusks, echinoderms, and 4 marine invertebrates (174535).

CRAMER, W. S., Lancaster, Pa.: 1 fossil starfish from the Ordovician (Martinsburg) formation at Swatra Gap, Lebanon County, Pa. (175274, exchange).

CRANE, JOCELYN. (See under New York Zoological Society.)

CRAWFORD, F. C., Cleveland, Ohio: 8 airplane models constructed by Charles H. Hubbell, illustrating important types produced during the period prior to World War I (176373, loan).

CREIDER, Dr. J. F. (See under U. S. Department of Agriculture, Soil Conservation Service.)

CRIST, ELLA, Hampton, Va.: Black silk dress of the style of about 1860 (175701).

CROCKER-WHEELER MANUFACTURING CO., Amperé, N. J.: A sewing machine motor made by the C. & C. Electric Motor Co. at New York in 1886 and a 10 h. p. bipolar motor, Serial No. 1, built by Crocker-Wheeler Electric Motor Co. at New York in 1889 (173517).

CRUMB, S. E., Puyallup, Wash.: 200 Tertiary invertebrate fossils from the Bogashiel River, Wash. (174230).

CUATRECASAS, Dr. J. (See under Comisión de Botánica.)

CUNNINGHAM, T. H., Rockville, Md.: 2 European goshawks (175217, exchange).

CURRAN, Dr. C. H. (See under American Museum of Natural History.)

CURTISS, ANTHONY, Port-au-Prince, Haiti: 175 fishes, 2 mammals, 23 crustaceans, 19 reptiles, and 13 insects from Haiti (175240); 48 reptiles and amphibians, 1 fish, 6 mollusks, and 136 insects from Haiti (174301); a collection of lizards, fishes, insects, and crustaceans from near Port-au-Prince (175632).

CUSTIS, ELEANOR PARKE, Washington, D. C.: 50 pictorial photographs (general), by Eleanor Parke Custis, for special exhibition during April 1947 (175871, loan).

DAHL, ERIK. (See under Zoological Institute.)

DALMAT, H. T., Bethesda, Md.: 19 mosquitoes from the Philippine Islands and 76 miscellaneous insects from Brazil (175608).

DANIEL, Brother, Medellín, Colombia: 50 plants from Colombia (173496, 175110, 175813); 4 Colombian minerals (175010, exchange).

DANIEL, Brother, Carrera, Colombia: 4 Tertiary and Mesozoic fossil invertebrates from Colombia (174124).

DARBY, R. C., Atlanta, Ga.: 1 sea-urchin from Florida (174515).

DARROW, Prof. ROBERT A. (See under University of Arizona.)

D'ASCENZO, NICOLA G., Bala-Cynwyd, Pa.: 1 gem, friedelite, from Franklin, N. J. (175388).

DAUGHERTY, F. M., Jr., Houston, Tex.: 20 mollusks from Okinawa (172741).

DAUGHERTY, Col. FRANK M. and Mrs. GLADYS, Central City, Colo.: An 1873 Enterprise drug mill and 3 sets of Hessian crucibles (175130).

DAVENPORT, CHARLES, Brooklyn, N. Y.: Edison spring-wound cylinder phonograph, serial No. 586504, complete, and 42 cylinder records (176411).

DAVIS, ALVIN C., Modesto, Calif.: Upper cheek tooth of a fossil horse (174509).

DAVIS, Mrs. PERCY HAMILTON, Washington, D. C.: Collection of 23 specimens of textiles, metal, wood, ivory, horn, and leather work from Java, Sumatra, and Bali obtained in Java 1909-1915 (173798); 12 ethnological objects obtained by the donor in Java between the years 1910 and 1915 (176031).

DAVIS, Col. ROBERT, Arlington, Va.: Earthenware cup and bottle from Speicher, Germany, presented to the donor following World War I (176151).

DAVIS & GECK, INC., Brooklyn, N. Y.: 2 sets of 12 halftones for addition to the series "Sutures in Ancient Surgery" (173716).

DAY, F. B., Owosso, Mich.: "Buggy rake" used in harvesting grain in the days of the cradle (175393).

DAYTON, WILLIAM A. (See under U. S. Department of Agriculture, Forest Service.)

DEARBORN, DR. NED, Littleton, N. H.: 602 slides of sectioned mammal hairs and a 59-page manuscript relating to their preparation (174336).

DECKER, DR. CHARLES E., Norman, Okla.: 50 Silurian bryozoans from Oklahoma (173900); 6 holotypes, 2 paratypes, and 2 figured specimens of Ordovician crinoids and cystoids from Oklahoma (173929, exchange); 2 brachiopods from the Ordovician, Viola, formation of Oklahoma (176064).

DEBEAUFORT, DR. L. F. (See under Zoological Museum, Amsterdam.)

DEHN, ADOLF, New York, N. Y.: 32 lithographs for special exhibition during February 1947 (175324, loan).

DEICHMANN, DR. ELIZABETH. (See under Harvard University, Museum of Comparative Zoology.)

DEIGNAN, H. G., Washington, D. C.: 4 plants from Virginia and the District of Columbia (173561); 1 weasel skull (173955).

DEJUR-AMSCO CORP., Long Island City, N. Y.: 1 model 50-A Autocritic exposure meter and an Eveready case for it (174762); DeJure "1000" 8-mm. motion-picture projector with carrying case (176330).

DE LAUBENFELS, DR. M. W., Pasadena, Calif.: 2 sponges from North Carolina (174552).

DE LONG, DR. D. M., Columbus, Ohio: 1 insect, paratype of a new species (176339).

DEL VALLE, DR. PEDRO G., San Juan, Puerto Rico: 2 fresh-water shrimps with isopod parasites (175289); 35 crustaceans (175416).

DE OTERO, DR. JORGE RAMOS. (See under Ministerio de Agricultura.)

DE PAUW UNIVERSITY, Greencastle, Ind.: (Through Prof. T. G. Yuncker) 139 plants from Wyoming (173887, exchange).

DEPUE, OSCAR B., Chicago, Ill.: 1 60-mm. Gaumont camera (176344).

DE SCHAUENSEE, R. M. (See under Academy of Natural Sciences of Philadelphia.)

DE TERRA, DR. HELMUT, New York, N. Y.: 5 mollusks from near Tepexpan, Valley of Mexico; also 15 samples of diatom material (175212).

DEVAN, MRS. SPENCER C. (See under Mrs. Wesley W. Tillotson.)

DIAMOND, MRS. ELIZABETH W., Cleveland, Ohio: (Through Ruel P. Tolman) 1 bookplate of Elizabeth Watson Diamond by Will Simmons after a design by Thomas Bewick (176059).

DICKSON, VIOLET (MRS. H. R. P.), Al Kuwait, Kuwait: 22 rodents from Kuwait, Persian Gulf (173833, 175138).

DIDDELL, MRS. MARY W., Jacksonville, Fla.: 2 plants from Florida (175686).

DIEKE, DR. G. H., Baltimore, Md.: 87 miscellaneous beetles from South America (170271); 1,242 beetles from Peru (175101, exchange).

DIETRICH, DR. HENRY. (See under Cornell University.)

DODGE, HAROLD R., Macon, Ga.: Holotype, allotype, and larval slide of a new species of mosquito (171660).

DODGE & OLcott, INC., New York, N. Y.: An exhibit of essential oils for the section of public health (176334).

DONOVAN, MRS. J. W., West Palm Beach, Fla.: 1 larval crustacean (176050).

DOOCHIN, MR. HERMAN D., Miami, Fla.: 13 shrimps, 2 isopods, and 3 mollusks (176054).

DOUGHERTY, Dr. ELLSWORTH C., Berkeley, Calif.: 5 types and allotypes of nematodes (174876).

DRAKE, Dr. C. J. (See under Iowa State College.)

DRAKE, ROBERT J., Albuquerque, N. Mex.: 34 fresh-water and land mollusks from Colorado and New Mexico (172112, 175776).

DRESSEL, EDWIN H. (See under Treasury Department, Bureau of the Mint.)

DRYDEN, Dr. LINCOLN, Washington, D. C.: A right lower cheek tooth of a fossil horse, found on beach south of Scientists Cliffs, Calvert County, Md. (174717).

DUCKE, Dr. A. (See under Instituto Agronomico do Norte.)

DUFFEY, T. E., West Palm Beach, Fla.: 20 termites, soldiers and nymphs (175396).

DUGAND G., Dr. A., Bogotá, Colombia. (See under Instituto de Ciencias Naturales.)

DUNBAR, Dr. CARL O. (See under Yale University.)

DUNLAP, Capt. S. B., Washington, D. C.: 1 nest of Argentine ovenbird (174967).

DU PONT, JAMES M., Chatham, N. J.: 58 Cretaceous and Eocene fossils from New Jersey (174796, 174842); 14 mollusks from near Clearwater, Fla. (175303); 90 invertebrate fossils from Eocene and Cretaceous rocks of New Jersey, 5 specimens of silicified wood from Tertiary rocks of New Jersey and 6 nodules of the mineral vivianite from the Hornerstown marble of New Jersey (176094, exchange).

DU PONT DE NEMOURS & Co., Inc., E. I., Wilmington, Del.: An exhibit showing the manufacture, properties, and uses of nylon, with yarn and fabric specimens (176161).

EAST AFRICAN AGRICULTURAL RESEARCH INSTITUTE, Amani, Tanganyika Territory: 72 plants from Tanganyika (174044, exchange); (through P. J. Greenway) 43 plants from South Africa (175335); 70 plants from East Africa (175715).

EASTMAN KODAK Co., Rochester, N. Y.: (Through H. H. Johnson) 31 dye transfer color prints for exhibition during January 1947 (174988, loan).

EASTON, WILLIAM H.: 7 plants from New Caledonia (174819).

ECKERT, Mrs. FRANK L. (See under Mrs. G. H. Rick.)

EDGAR, Lt. SAMUEL A. (See under War Department, 19th Medical General Laboratory.)

EFFINGER, WILLIAM L. (See under California Co.)

ELDER, ROBERT A., Jr. (See under Mrs. Anna Cote.)

ELDOT, HERMAN, New York, N. Y.: 4 topazes, illustrating the steps in cutting a gem stone (174791).

ELLER, Dr. E. R., Pittsburgh, Pa.: 140 gastropods from the Devonian (Transverse) Potter Farm formation, $\frac{1}{4}$ to $\frac{3}{8}$ mile south of Four Mile Dam, Alpena County, Mich. (175677).

ELLIS, T. KENNETH, Hot Springs, Va.: 84 mollusks from Virginia and West Virginia (174298).

ELTON, Rev. WILLARD R., Berwyn, Pa.: A bow and 7 arrows, wooden club, and two sets of spindles from the Nhambiquara Indians of Brazil (174941); 19 ethnological specimens from a Nhambiquara Indian village 112 miles west of Juruena, Brazil, obtained by the donor in 1943 while stationed at the Presbyterian mission in that village (175335).

ELY, Dr. CHARLES A., Madison, Wis.: Holotype and paratype of echinoderm from Canton Island reed (173699).

EMIGH, G. DONALD, New York, N. Y.: Specimen of rossite from Rifle, Colo. (175099).

ENKE, J. W. (See under War Department, 19th Medical General Laboratory.)

ERDMAN, DONALD S., Washington, D. C.: 68 fishes (gobies) from Puerto Rico and Lesser Antilles collected in 1940, 1941, and 1946 by donor and others (174917).

ERSKINE, W. B., Baltimore, Md.: Stone ax fragment found in the south middle portion of Allegany County, N. Y., near Pennsylvania border (175592).

ESCOLA NACIONAL DE AGRONOMICA, Rio de Janeiro, Brazil: (Through Dr. A. da Costa Lima) 19 beetles (175024, exchange).

ESCUELA AGRICOLA PANAMERICANA, Tegucigalpa, Honduras: (Through Dr. Louis A. Williams) 81 grasses and ferns from Honduras (174958); 19 grasses from Honduras (175859, exchange).

ESCUELA NACIONAL DE CIENCIAS BIOLÓGICAS, Mexico, D. F.: (Through Dr. José Alvarez) 4 paratypes of a blindfish (174018).

ESQUIRE, Chicago, Ill.: 6 original paintings and 2 reproductions by Peter Helck for special exhibit March 3 through April 27 (175499, loan).

ESSIG, Prof. E. O., Berkeley, Calif.: 28 slides of aphids, representing 21 species in 9 genera, 19 of the species represented by paratypes (173560).

ESTACIÓN EXPERIMENTAL NACIONAL DE BALCARCE, Province de Buenos Aires, Argentina: (Through Dr. Roberto

MILLAN) 1 plant from Argentina (173459).

EVANS, MARY SIBLEY, Washington, D. C.: A Chantilly silk lace shawl, 2 tortoise shell combs, 19th century silk fan with ivory staves, and a silk scarf (174476).

EWAN, JOSEPH, Beltsville, Md. (See under U. S. Department of Agriculture, Bureau of Plant Industry, Soils, and Agricultural Engineering.)

FAIR, J. C., Quebec, Canada: (Through Cornelius Mitchell) 12 parasitic copepods (173332).

FALES, HERBERT G., New York, N. Y.: Painting in color by Peter Helck of 2 old racing cars for special exhibition March through April 1947 (175342, loan).

FARNEMAN, JOHN D. (See under Photo Research Corp.)

FAST, A. H., Arlington, Va.: 1 sharp-shinned hawk (174902).

FAST, FRANCIS R., Hillsdale, N. J.: 29 finger paintings by Francis R. Fast for special exhibition September 9 to 29, 1946 (174090, loan); 1 finger painting (174968).

FEDERAL SECURITY AGENCY, U. S. Public Health Service, Bethesda, Md.: (Through Dr. W. H. Wright) 182 miscellaneous insects collected from eastern bank of River Jordan by Dr. J. Palmoni, Kinneret, Palestine (174178); (through Dr. Robert J. Huebner) 2 house mice (174463); 1 mollusk from Canada (175264).

U. S. Public Health Service, Hamilton, Mont.: (Through Maj. W. L. Jellison, Rocky Mountain Laboratory) 221 miscellaneous beetles and flies (173881); 2 cliff swallows (173976); 2 insects taken from the nest of swallows, Granite County, Mont., in 1936 (175053); 315 spiders and 176 insects from Assam and Burma (175210); 35 common North American fleas (175527); 194 pinned miscellaneous insects, mostly from Burma and India (175798); 2 slides of mites (176061); 4 fly larvae (176067); 3 slides of mites, 2 from Washington and 1 from Montana (176179); 4 fly larvae (176325); (through Dr. Glen M. Kohls) 1 tick (paratype) from southern Mexico (175710); (through Dr. George W. Wharton) paratype of a new species of mite (175746).

U. S. Public Health Service, Honolulu, Hawaii: (Through Capt. Willis W. Worth) 157 flies (173842); 4 mosquitoes, types and paratypes of 2 species (174087).

FELLOWS, ROBERT E. (See under Robert M. Chapman.)

FERNALD, Prof. M. L. (See under Harvard University, Gray Herbarium.)

FERNÁNDEZ, DR. MIGUEL, Pasaje Gropo, Argentina: 39 photographs of Argentine birds and mammals (174719).

FEWSMITH, J., Cleveland, Ohio: Painting, in color, by Peter Helck, of scene in railroad yard, for special exhibition March through April 1947 (175343, loan).

FIELD, W. D., Washington, D. C.: 3,000 miscellaneous insects, 6 crustaceans, 1 lizard, and 9 mollusks collected on Okinawa during 1944-1945 (175819).

FILLYAW, HELEN, Wilmington, N. C.: Dress and underwear from a wedding trousseau of 1875 (173449).

FISCHER, ALFRED G., New York, N. Y.: 73 Eocene echinoids from the basal part of the Ocala limestone, on and near Withlacoochee River, Citrus and Levy Counties, Fla. (175488).

FISHER, GEORGE L., Houston, Tex.: 60 plants from Mexico and Texas (174376).

FISHER, DR. HARVEY J., Honolulu, Hawaii: 2 bird skins (174141).

FISHER, DR. W. K., Pacific Grove, Calif.: 6 salamanders and 11 brachiopods (173985); 1 sipunculid worm (174801).

FITE, EUGENE J., Washington, D. C.: "Haole Girl," etching, and plate (176058).

FLEISCHER, DR. MICHAEL, Washington, D. C.: Type material of the minerals gamagarite and partrigeite from the Postmasburg Manganese deposits, Cape Province, South Africa (174899).

FLEMING, ROBERT L., Ann Arbor, Mich.: 83 ferns from India (174104).

FLORIDA, UNIVERSITY OF, Gainesville, Fla.: (Through Lillian E. Arnold) 1 grass from Florida (174723, exchange).

FLORY, M. (See under Gustave Bellon.)

FOOTE, KENNETH A., Washington, D. C.: Scale model of Royal National Life Boat Institute's motor life boat *Cyril and Lilian Bishop*, of Hastings, England, made by the donor (173799).

FORD, HUGH A., New York, N. Y.: Specimen of roweite from Franklin, N. J. (type material) (175353).

FOREIGN ECONOMIC ADMINISTRATION, Washington, D. C.: (Through Walter C. Hand and Dr. Andrew V. Corey) 26 minerals and ores from various localities in India (173069).

FOREST RESEARCH INSTITUTE AND COLLEGE, Dehra Dun, India: 38 grasses (174204, exchange).

FOSBERG, DR. F. R. (See under Navy Department.)

FOWLER, JAMES A., Chevy Chase, Md.: 150 mollusks from Maryland and Virginia (175338).

FRANCLEMENT, Dr. J. G., Ithaca, N. Y.: 2 specimens of Lepidoptera—holotype and paratype (173257). (See also under Estate of Edward D. McDonald.)

FRANCO, Dr. ASELA B., Cebu City, Cebu, P. I.: 265 marine mollusks from Cebu Island, P. I., including a new species (176077).

FRASER, Dr. H. N. (See under British Guiana Department of Agriculture.)

FREY, DAVID G., Chapel Hill, N. C.: 4,239 crustaceans, bryozoans, and worm; diatoms; mollusks; insects; fishes; amphibians—all collected in the Philippine Islands (173906). (See also under Navy Department, Naval Medical Research Unit No. 2.)

FRIDAL, K. H., Jr., Tremonton, Utah: 3 specimens of limestone containing fossils from Wasatch Mountains, Utah (173861).

FRITZSCHE BROTHERS, INC., New York, N. Y.: 1 each of the essential oils of Roman chamomile, wormwood, and erigeron (173920).

FRIZZELL, Mrs. HARRIETT E., Austin, Tex.: 17 spiders (174596).

FROST, C. A., Framingham, Mass.: 62 beetles and insects (174901); 56 beetles and flies (174985).

FULLER, Dr. H. S., Washington, D. C.: 25 fresh-water snails from Burma (174091).

FURGASON, Dr. WALDO H., Stanford University, Calif.: 3 fresh-water medusae (174751).

GAILLARD, PEYRE, Atlanta, Ga.: 1 cultivated plant (173773).

GALINDO, PEDRO, Panama City, Panama: 2 mosquitoes (174851).

GALLOWAY, MAUDE, Washington, D. C.: 5 daguerreotypes, 3 ambrotypes, and 1 tintype, family portraits of the Sattes and Galloway family (173564).

GAMARRA C., Dr. GONZALO, Cuzco, Peru: 15 butterflies collected near Cuzco (174838).

GAMEWELL Co., Newton Upper Falls, Mass., Gamewell, threefold, Peerless, fire-alarm box, M-34-34, serial No. 178965, No. 3542 (174545).

GARLAND, PEYTON. (See under Georgia Geological Survey.)

GARRETT, A. O., Salt Lake City, Utah: 35 plants from Utah (174109).

GATES, Pfc. PHILLIPS, Jr., Rockville, Md.: Native gold from stream gravel in Bull Run, Va. (173728).

GAZIN, Dr. C. LEWIS. (See under Smithsonian Institution, National Museum, collected by members of the staff.)

GENERAL ELECTRIC Co., *Meter and Instrument Division*, West Lynn, Mass.: (Through G. C. Anderson) 1 General Electric Model DW-58 exposure meter, 1 General Electric Model DW-47 exposure meter (174697).

GENTRY, HOWARD SCOTT, Ann Arbor, Mich.: 8 plants from Mexico (173467).

GEORGIA GEOLOGICAL SURVEY, Atlanta, Ga.: About 1,500 Paleozoic invertebrate fossils from Georgia, which were collected by the late Dr. Charles Butts (through Peyton Garland) (176089).

GIBBS, BEN, Chevy Chase, Md.: 1 song sparrow (173544).

GILMORE, Dr. RAYMOND, Washington, D. C.: 14 reptiles and amphibians, 7 insects and spiders, 3 eels, and 1 crab from South America (175095).

GODDARD, A. N., Detroit, Mich.: Fluorite from the Mahoning Mining Co., Cave-in Rock, Ill. (174713).

GOERGENS, GEORGE R., Washington, D. C.: 22 miscellaneous items relating to photography (175784).

GOLDBERG, LOUIS, Norwich, Conn.: 6 pairs of ice skates (173713); ice skate with letters "U. S." stamped in toe plate (174442).

GONTHIER, LEON, Rocky Hill, Conn.: 21 snakes from Hartford and Middlesex Counties, Conn. (174253; 175177).

GOODCHILD, Prof. C. G., Woods Hole, Mass.: Mollusk from Massachusetts (173458).

GOODING, LESLIE N., Ajo, Ariz.: 53 grasses from Arizona (173236).

GOODRICH Co., B. F. (See under Sir Walrond Sinclair.)

GORDON, LESLIE F., Davis, Calif.: 3 crustaceans (173262).

GORGAS MEMORIAL LABORATORY, Panama, Panama: (Through Harold Trapido) 1 grooved-bill ani (albine) (175604).

GRAF, J. E., Washington, D. C.: 39 plants from Shenandoah National Park, Va. (174857); 1 double-flowering dogwood from Washington, D. C. (176270).

GRAHAM, DAVID C., Nanking, China: 1 earthenware vessel from China (174-145).

GRAHAM, O. H., Menard, Tex.: (Through L. J. Bottimer) Approximately 100 miscellaneous insects from the Southwest Pacific (174418).

GRANT-SMITH, U., Washington, D. C.: 1 Oriental long shawl or "Dosciale" having pine-cone design (175345).

GREENE, GEORGE M., Harrisburg, Pa.: 1 piece of insect-infested wood—work of the beetle *Lyctus* (173559); 3 models of scale insects (174986).

GREENE, HERBERT A. (See under M. L. Snyder & Son.)

GREENFIELD, ALBERT, New York, N. Y.: 60 pictorial photographs of Haiti, Venezuela, Trinidad, and Surinam by Albert Greenfield for special exhibition during October 1946 (174375, loan).

GREENFIELD, RAY, Honolulu, Hawaii: 30 amphipods and 4 shrimps from Maunalua Bay (172341); 100 amphipods and 6 copepods from Waikiki Beach (175618); 300 amphipods and 2 shrimps (174071); 303 crustaceans (175278, 175654).

GREENWAY, Dr. P. J. (See under East African Agricultural Research Institute.)

GREETING CARD INDUSTRY, New York, N. Y.: A color reproduction of 1884 Prang chromolithograph Christmas card (175323).

GREGEE, Dr. D. K., Fulton, Mo.: 100 Devonian invertebrate fossils, including 1 handsome crinoid from the Devonian of central Missouri and 1 Mississippian crinoid from eastern Missouri (175860).

GRIFFITHS, J. T., Lake Alfred, Fla.: 6 land shells from Florida (173416).

GROVES, MICHAEL FRANK, Baltimore, Md.: 8 crabs and 1 jellyfish, collected in the Pacific area (172916).

GRUNER, Prof. JOHN W., Minneapolis, Minn.: 2 specimens of minnesotite from near Merritt Mine, Cuyuna Range, and near Chisholm on the Mesabi Range, respectively (175144).

GUAM, CIVIL ADMINISTRATOR OF, F. P. O., San Francisco, Calif.: 6 adult black-widow spiders and 10 egg masses from Guam (175102).

GULLERS, K. W., Washington, D. C.: 207 pictorial photographs of Sweden for special exhibition during July 1946 (173702, loan).

GUNTER, GORDON, Rockport, Tex.: 8 immature spadefoot toads from Texas (173862); 1 spiny lobster (174893).

HADLEY, JAMES E., Washington, D. C.: 5 wooden combs of contemporary manufacture, collected by the donor in 1943 at the village of Nadzab, 30 miles west of Lae, Huon Gulf, eastern New Guinea (174467).

HAEGER POTTERIES, INC., Dundee, Ill.: 6 specimens of modern art pottery (173367).

HAIBACH, Capt. DONALD. (See under War Department, Natural Resources Section.)

HAM, W. E., Norman, Okla.: 32 slabs of Oklahoma Upper Cambrian and Lower Ordovician rocks containing several hundred silicified fossils (173901); 61 Cambrian and Ordovician blocks containing many hundred fossils, and 14 sponges and trilobites from the Lower Ordovician of Arbuckle Mountains, Okla. (175308); 30 blocks of Lower Ordovician limestone from Arbuckle Mountains containing silicified fossils (175707).

HANCOCK FOUNDATION, ALLAN, Los Angeles, Calif.: 63 plants from tropical America (173769).

HAND, WALTER C. (See under Foreign Economic Administration.)

HANSEN, MERLE F., Lincoln, Nebr.: 4 microtine rodents from Lincoln (174784); type and paratype of a cestode (175296).

HANSTROM, Dr. BERTIL. (See under Zoological Institute.)

HARDEN, PHILIP H. (See under Kentucky Department of Health.)

HARDY, BENSON B., Inyokern, Calif.: 59 seed plants from Inyokern, Calif. (176239).

HARDY, DR. D. ELMO, Ames, Iowa: (Through H. Oldroyd) 22 flies representing 11 species, 5 of which are represented by 9 paratypes (175932); 10 flies, being paratypes of 2 species (176211). (See also under Office of the State Entomologist, Iowa.)

HARLTON, BRUCE H., Tulsa, Okla.: 67 slides of fossil material, types illustrating a paper, "Micropaleontology of the Pennsylvanian Johns Valley Shale of the Ouachita Mountains, Oklahoma, and its Relationship to the Mississippi Caney Shale" (176175).

HARPER, DR. FRANCIS, Swarthmore, Pa.; A small collection of insects (ectoparasites) from Pennsylvania (172863); 50 vials of ectoparasites from Pennsylvania mammals 174042.

HARRINGTON, Prof. H. D. (See under Colorado College.)

HARRINGTON Co., Philadelphia, Pa.: A Nesthill tire pump, a pocket door latch, and an adjustable die stock, patented 1866 (175631).

HARRISON, DR. BERTRAND F. (See under Brigham Young University.)

HARRISON & HARRISON, Hollywood, Calif.: 1 No. 2 (ser. V) Harrison light corrector set (174761).

HARVARD UNIVERSITY, *Arnold Arboretum*, Jamaica Plain, Mass.: Bamboo from India (173241); 96 grasses from Perlas Islands, collected by Ivan M. Johnston (173291); 377 plants (173426); 51 plants from New Guinea (175117); 4 West Indian grasses (175120); 2 grasses from New Guinea (175180); 5 grasses from Fiji (175227, exchange).

Gray Herbarium, Cambridge, Mass.: 55 Brazilian plants collected by Dr. L. O. Williams (173480); 20 plants from Brazil (173629); 406 plants (174797); 18 grasses from Brazil (175082); 5 plants from Brazil (175108); (through Prof. M. L. Fernald) 14 willows from Newfoundland (176267); (through Dr. Lyman B. Smith) 23 Brazilian plants collected by Dr. Williams (176331, exchange).

Museum of Comparative Zoology, Cambridge, Mass.: 55 mollusks (148149); 1 mollusk, from off Punta Alegre, Camagüey, Cuba (169483); 5 beetles representing 4 species, all paratypes (176326, exchange); 2 (neoparatypes) of mollusks from Plymouth, Mass. (174150); (Through Dr. Joseph Bequaert) 1 female paratype of an insect (174458); 4 paratypes of ants, etc. (175946); (through William J. Clench) 4,300 mollusks (174826); (through Dr. Elizabeth Deichmann) 126 marine invertebrates (173551).

HASEROUCK, Dr. E. M., Washington, D. C.: 2 humeri of a New Mexican duck (175870).

HATAI, Dr. KOTOR, Tokyo, Japan: 30 Tertiary and Recent brachiopods from Japan (173617, exchange).

HATFIELD, Mrs. GEORGE W., Newton, W. Va.: A gordiid worm from Newtown, W. Va. (173691).

HAUGHT, OSCAR L., Bogotá, Colombia: 131 plants from Colombia (175926).

HAWAIIAN BOARD OF AGRICULTURE AND FORESTRY, Honolulu, Hawaii: (Through Vernon E. Brock) 1 fish (176218).

HAWAIIAN SUGAR PLANTERS' ASSOCIATION, Honolulu, Hawaii: (Through Dr. Elwood C. Zimmerman) 67 bugs (175354, exchange); (through Dr. O. H. Swezey) 35 chalcid-flies (176148).

HAWEIS, STEPHEN, Sylvia, Dominica, B. W. I.: 151 fishes and 2 crustaceans collected in 1940 in Dominica (175938).

HAYNES, A. J., New York, N. Y.: 1 Haynes Photometer - Densitometer (174462).

HAZZARD, ROY T., Shreveport, La.: 7 micropaleontologic samples of Upper and Lower Cretaceous forms from Texas (173541).

HEBREW UNIVERSITY, Jerusalem, Palestine: (Through Dr. H. Steinitz) 37 fishes from Jerusalem (176041, exchange).

HEDGPETH, JOEL W., Rockport, Tex.: 4 mud shrimps (172321); 13 marine mollusks from Aransas Bay, Tex. (173160); 2 lots of crabs from Texas (174616); 3 hermit crabs (174744); 1 mud shrimp (175584); 11 shrimps from Wheeler Reservoir area, T. V. A. (175843).

HELCK, PETER, Boston Corners, N. Y.: 14 paintings in color and 6 etchings, by Peter Helck for special exhibit March 3 through April 27, 1947 (175532, loan).

HELPFER, JACQUES R., Mendocino, Calif.: 1 beetle (175022).

HELLER, D., Kearney, N. J.: A Russian quarter-kopeck piece struck in 1875 (175514).

HELSLEY, O. L., Washington, D. C.: 1 albino squirrel (174427).

HENBEST, LLOYD G., Washington, D. C.: 1,000 mollusks from Colorado (176038). (See also under Tohoku Imperial University.)

HERALD, Capt. EARL S., Washington, D. C.: 67 fishes from Indian River at Titusville, Fla. (175028); 5,975 fishes, 44 reptiles and amphibians, 5 insects, 38 crustaceans, and 37 mollusks collected in 1945-46-47 in Florida (175458). (See also under Smithsonian Institution, National Museum, collected by members of the staff.)

HERARIO "BARBOSA RODRIGUES," Itajai, Santa Catarina, Brazil: (Through Dr. P. Raulino Reitz) 3 plants from Brazil (176224, exchange).

HERBARIUM ANCHIETA, Porto Alegre, Brazil: (Through B. Rambo, S. J.) 121 Brazilian grasses (175909, exchange).

HERMANN, Dr. F. J., Beltsville, Md.: 91 plants from Colombia and Brazil (174471). (See also under U. S. Department of Agriculture, Bureau of Plant Industry, Soils, and Agricultural Engineering.)

HESS, Dr. FRANK L., Bethesda, Md.: 15 2-inch cubes of the following metals: Silica, chromium, nickel, cobalt, magnesium, manganese, copper, antimony, bismuth, tin, lead, zinc, aluminum, cadmium, telurium (175588). (See also under C. H. Robinson, Sr.)

HEWATT, Prof. WILLIS G., Fort Worth, Tex.: 80 crustaceans (172516).

HIATT, Prof. ROBERT W., Honolulu, Hawaii: 1 mollusk from Hawaii (173486).

HICKEY, Mrs. J., Patuxent, Md.: 1 bird (174523).

HICKOK ELECTRICAL INSTRUMENT Co., Cleveland, Ohio: 1 Hickok duplex exposure meter (174524).

HIGGINSON, Miss J., Arlington, Va.: 32 plants (173494).

HILDEBRAND, Dr. S. F. (See under Department of the Interior, Fish and Wildlife Service.)

HILL, JEFF, New York, N. Y.: 1 tektite from central Java, East Indies (175742, exchange).

HILTON, HOMER. (See under Argus, Incorporated.)

HINCKLE, OLIVER C., Washington, D. C.: (See under Connie Stover.)

HINCKLEY, Dr. L. C. (See under Sul Ross State Teachers College.)

HITCHCOCK, Dr. C. L. (See under University of Washington.)

HOBBS, Dr. HORTON, H., Jr., Charlottesville, Va.: 4 large cans of crayfishes (173313); 9 crabs (174169).

HOBERLANDT, Dr. LUDVIK, Prague, Czechoslovakia: 8 bugs (174595, exchange).

HODGE, Lt. Gen. JOHN R., APO 235, Korea: Photographs of 2 documents in the Korean and Japanese languages concerning the annexation of Korea to Japan in 1910; and typewritten translations of these documents in the English language (8 specimens) (174259).

HOEHN, Dr. F. C. (See under Instituto de Botanica.)

HOFF, Prof. C. CLAYTON, Fort Collins, Colo.: 10 amphipods (174892).

HOFFMAN, RICHARD L., Clifton Forge, Va.: 1 gray squirrel (174428); 60 fresh-water snails from Swift Creek, Clifton Forge, Va. (174438); 650 land and fresh-water mollusks from Virginia (174869); 3 mammals from Clifton Forge, Va. (175681); 7 land- and brackish-water mollusks from Virginia (175984); 4 amphipods from Isle of Wight County, Va. (176362).

HOFFMAN, RICHARD L., Clifton Forge, Va., and HUBERT I. KLEINPETER, 3d, North Chevy Chase, Md.; 12 small mammals from Alleghany and Albemarle Counties, Va. (175326).

HOLDERER, GEORGE B. (See under Mrs. June M. Holderer.)

HOLDERER, Mrs. JUNE M., Arlington, Va.: (Through George B. Holderer) Basseto horn, or alto clarinet, made approximately in the year 1800, and a small lantern clock with hanging shelf (173731); Tiffany art-glass vase, cup of carved rhinoceros horn from China, and a hand-wrought silver necklace from India (173930).

HOLDRIDGE, L. R., Ann Arbor, Mich.: 97 plants from Haiti (174730).

HOLGERSEN, Dr. HOLGER, Stavanger, Norway: 54 ants representing 16 species, from Norway (174936); 62 ants representing 21 species from Norway (176340, exchange).

HOLLISTER, Mrs. MABEL P., Phoenix, Ariz.: 151 plants from the District of Columbia and vicinity, collected by Ned Hollister, and from Wisconsin (175800); 60 plants from the southwestern United States (176203).

HOLLOMAN, JESSE, Baltimore, Md.: 5 salamanders from Elkridge, Md. (173863).

HOPE, CLIFFORD R., Jr., Washington, D. C.: German battle flag of the period of World War II (174131).

HOTCHKISS, NEIL, Hyattsville, Md.: 8 plants from Maryland (173562).

HOWARD, Dr. RICHARD A., Cambridge, Mass.: 1 crab, 1 *Squilla* (175281); 111 grasses from the Dominican Republic (175618).

HOWE, D. R., Chula Vista, Calif.: 31 plants from California (174802).

HOWELL, A. BRAZIER, Bucksport, Maine: 1 northern white-tailed deer from near Bucksport (174908).

HOWELL, JOHN THOMAS. (See under California Academy of Sciences.)

HUBBEL, CHARLES H., Cleveland, Ohio: A complete set (107), to date of colored prints of aircraft as painted by the donor for the annual calendars of Thompson Products, Inc. (176346).

HUBBS, Dr. CARL L. (See under University of California, Berkeley.)

HUBRICHT, LESLIE, Battle Creek, Mich.: 2,973 marine invertebrates and 26 lots of insects (175844).

HUEBNER, Dr. ROBERT J. (See under Federal Security Agency, U. S. Public Health Service.)

HUGGINS, JAMES H., Arlington, Va.: Wooden effigy pipe, carved by a native of a village near the headwaters of the Dilku River, Nagga Hills region, Province of Assam, India (173797).

HUGHES, GEORGE M., Havertown, Pa.: Black-and-white painting by Peter Helek of 2 racing cars, for special exhibition March through April 1947 (175341, loan).

HUMES, Dr. ARTHUR G., Storrs, Conn.: A collection of miscellaneous invertebrates comprising crustaceans, mollusks, a centipede, and scorpions from French Morocco, Philippines, Borneo, and New Guinea (174363); 31 slides of copepods including holotype, allotype, and paratypes of a new species (175452).

HUNTER, ELWOOD B., Sitka, Alaska: 1 mollusk from Alaska (174976).

HUNTER, Lt. Col. GEORGE, U. S. A., Washington, D. C.: 200 specimens of medically important mollusks from Mindoro Island, Philippines (176039).

HUNTER, Maj. GEORGE W., 3d. (See under War Department, Army Medical Center.)

HURLEY, JOHN B., Yakima, Wash.: 18 bird skins (sparrow, warbler, flycatcher, bluebird, horned lark, house finch) (173849, exchange); 1 bird skin (176286).

HUSSEY, Capt. ALLIS F. (See under War Department, Natural Resources Section.)

HYDEN, B. S., Franklin, La.: 7 freshwater shells from Louisiana (176047).

IDAHO, UNIVERSITY OF, Pocatello, Idaho: 4 grasses from Idaho (175271, exchange).

ILG, C. L. (See under Weston Electrical Instrument Corp.)

ILLINOIS, UNIVERSITY OF, Urbana, Ill.: 1 grass (174805, exchange).

ILLINOIS STATE NATURAL HISTORY SURVEY, Urbana, Ill.: (Through Dr. H. H. Ross) 34 insects representing 6 species, 5 of them by paratypes (168964, exchange); 44 slides of aphid paratypes representing 24 species described by Hottes and Frison (174521).

IMPERIAL SCIENCE MUSEUM, Tokyo, Japan: 74 minerals from Japan (174793, exchange); 4 meteorites, Tanokami, Okirai Village, and Yonozu, Japan, and Koso Sho, China (174799, exchange).

INGRAM, ROBERT L., Washington, D. C., and Dr. RICHARD M. BOHART, Davis, Calif.: 90 miscellaneous insects collected on the islands of Truk and Okinawa (175606).

INSTITUTE OF TROPICAL AGRICULTURE, Mayagüez, Puerto Rico: 342 plants mostly from Venezuela, a few from Puerto Rico (173946, exchange).

INSTITUTO AGRONOMICO DO NORTE, Belém, Brazil: 672 plants collected by Dr. A. Ducke (174475); (through Dr. A. Ducke) 1 plant from Barbados (175-236); (through Dr. Alonso Wisniewski) 60 Amazon grasses (175749); (through Dr. W. A. Archer) 54 grasses (176055); (through G. A. Black) 21 grasses collected by G. A. Black in Peru (176265, exchange).

INSTITUTO BIOLOGICO, São Paulo, Brazil: 116 insects representing 17 species, 2 of them by paratypes (173620, exchange); (through Dr. Oscar Monte) 18 bugs (175318, exchange).

INSTITUTO DE BOTANICA, São Paulo, Brazil: (Through Dr. F. C. Hoehne) 10 plants from Brazil (175922, exchange).

INSTITUTO DE BOTÁNICA DARWINIÓN, San Isidro, Argentina: 100 plants from Argentina and Chile (174045, exchange).

INSTITUTO DE CIENCIAS NATURALES, Bogotá, Colombia: (Through Dr. A. Dugand G.) 1 duck (171563); 380 plants from Colombia (173631, 174-271, 175429, 175873, exchange); seeds from Colombia (175801, 175872, exchange).

INSTITUTO DEL MUSEO, Universidad Nacional de La Plata, La Plata, Argentina: (Through Dr. Ángel L. Cabrera) 35 plants from Argentina (173745, 175927, exchange).

INTERIOR, U. S. DEPARTMENT OF THE, Fish and Wildlife Service, Washington, D. C.: 4 beetle larvae from Maryland (173431); (through Dr. George B. Saunders) 30 bird skins and 3 bird skeletons (173594); (through Dr. S. F. Hildebrand) 63 fishes collected in Puerto Rico by Donald S. Erdman (173645); 3 fishes from Douglas, Ariz., collected by M. S. Crabtree (174211); 4 fishes from Burlington, Wis., collected by L. F. Grossman in 1942 (174828); 17 bird skeletons, 11 geological specimens, 26 lots of marine invertebrates, 160 mollusks, and 30 lots of insects collected by Allen J. Duvall and Charles O. Handley, Jr., in the Canadian Arctic and Greenland (174174); 8 partial skeletons of wild turkeys (174448); 10 grasses collected by Frank Beals in Unalaska (174578); 47 hummingbird skins from Colombia (174903); skeleton of Ross's goose (175103); 1 egg of sandhill crane (176262); 1,839 bird skins received between July 1, 1946, and June 12, 1947, not otherwise accessioned (176387); 271 mammals received from the Fish and Wildlife Service and entered on the Museum catalog books, Nos. 274943 to 275213, inclusive, between July 1, 1946, and June 12, 1947, not otherwise accessioned (176389).

Geological Survey, Washington, D. C.: 2 slabs of bauxite from Saline and Pulaski Counties, Ark., collected by Robert P. Bryson, 1945 (170618); 211 specimens of phlogopites and associated rocks from districts in Oaxaca, Mexico (173410); 525 Upper Cretaceous fossils from deep wells in Mississippi (50 of them figured) and 6 specimens of a new *Venericardia* from the Anacacho limestone, Uvalde County, Tex. (173477); 16 casts and 28 brachiopods, also a collection of 26 gastropods (173536); 42 tungstite, huebnerite, bindheimite, etc., from the Hammet tungsten district, Vance County, N. C., made by G. H. Espenshade (173537); 6 fossil oysters from J. V. Canterbury, J. R. Bell well

No. 1, depth 4,573-4,590 feet, Hinds County, Miss. (173618); 150 Devonian invertebrate fossils from the Dragon quadrangle, Arizona (173695); type specimen of a fossil insect from Fulda, Tex. (173894); 31 Ordovician Bryozoa from the Pogonip in Utah and Nevada (173897); 4 specimens of platy white albite and 1 white crystal of microcline from the old Rutherford mine, Amelia, Va. (173973); 46 Jurassic ammonites from Montana and Wyoming (174411); 68 Upper Cretaceous ammonites from Haiti; 190 Pliocene fresh-water mollusks from northern Utah; 100 fossil insects, 1 Devonian pelecypod from Alaska and a collection of Athens shale graptolites (174499); a collection of rocks and ores to illustrate the Cartersville district, Ga. (174502); approximately 100 small fossil mammals, reptiles, amphibians, and fishes from the Lance formation, Powder River County, Mont., collected by R. P. Bryson and party (174690); right maxilla, with 3 molars, of an extinct deer, from North Park, Jackson County, Colo., collected by R. E. Van Alstine (174691); 2 fishes from the Upper Cretaceous of Texas, collected by Dr. L. W. Stephenson (174814); (through Dr. J. B. Reeside, Jr.) 5 fossil fishes from Piedra River, Archuleta County, Colo. (174844); 1 Cretaceous coral from the Woodbine formation in Lamar County, Tex. (174934); holotype and paratype of a fossil echinoid from the Jurassic of the Big Horn Basin, Wyo. (175363); 100 Pleistocene land shells (175991); 20 identifiable fossil mammal specimens (176208); 14 fragmentary crustaceans from the Upper Cretaceous of Texas (175097); 23 specimens and 18 thin sections of selected material used in a geologic study of the area containing tin and spodumene in the Carolinas (175147); 6 mercury ores from Monte Amata District, Italy, and New Almaden District, Calif., collected by Edwin B. Eckel (175148); 7 sets of mercury ores and minerals chiefly representative of Mexican districts of Durango, Zacatecas, and Guerrero (175151); 3 samples of alunite from northeastern Texas, collected by Dr. L. W. Stephenson (175206); a collection of 1,000 bryozoans from the Simpson group

of Oklahoma (175286); 75 fossil cephalopods and about 75 animal-track impressions on shale, both lots from Carboniferous of Arkansas (175307); specimen of corundum-bearing gneiss from Montana Corundum mine, Gallatin County, Mont. (175417); 8 specimens of an ammonite from Travis County, Tex., (175587); 1 beryl crystal from Amelia, Va. (175687); 60 specimens of tungsten, copper, antimony, and tin ores from Japan and Korea (175962); 8 Tertiary ostracods (175973); 2 camel jaws, feet of camel, and antilocaprid from near Prescott, Ariz., and skull and jaws of *Phytosaur* from near St. Johns, Ariz. (175974); a collection (62) of granites, gabbros, diorite, aplites, etc., from Yosemite quadrangle, Yosemite Valley, Calif. (176260); 54 ostracods used by Ruth A. M. Schmidt to illustrate a paper entitled "Ostracoda from the Upper Cretaceous and Eocene of Maryland, Delaware, and Virginia" (176324).

National Park Service, Washington, D. C.: 15 plants from Arizona (173888); through Dr. W. B. McDougall 237 plants from Tennessee and Mississippi (174262, 175081); 82 plants from Mississippi and Tennessee (175081); (through J. W. Brewer, Jr.) 3 plants from Arizona (174397).

National Park Service, Mammoth Cave, Ky.: 21 plants from Kentucky (175940).

Office of Indian Affairs, Washington, D. C.: Incomplete skeletons (with skulls) of 2 male Indians found on the Crow Creek Indian Reservation, Fort Thompson, S. Dak., with associated European objects (173-583).

IOWA, OFFICE OF THE STATE ENTOMOLOGIST, Ames, Iowa: (Through Dr. D. Elmo Hardy) 1 fly (172955).

IOWA STATE COLLEGE, Ames, Iowa: Grass from Iowa (174626, exchange); 54 grasses from Alaska (174628, exchange); (through Dr. C. J. Drake) 15 bugs (175726).

IRELAND, H. A., Midland, Tex.: A probable new genus of trilobite from the Marathon limestone, west Texas trilobite (176142).

ITO, Prof. TEIICHI, Tokyo, Japan: 4 kochite and other minerals from Japan (174795, exchange).

JACKSON, RALPH W., Cambridge, Md.: 65 snails from Colombia and Ecuador, including types of 3 new species

(172113); 1 mollusk from Mindoro, Philippines (174603); 4 land shells from the Philippine Islands (174915).

JAMES, CLAYTON M., Landover, Md.: 19 birds (174035, 175979).

JAMES, Mrs. LAURA B. (address unknown): Water tumbler of pressed glass with cabbage rose design pattern, manufactured by the Central Glass Co., Wheeling, W. Va., and received as a wedding present by the donor's mother in 1865 (176303).

JAMES, Dr. MAURICE T., Fort Collins, Colo.: 17 flies representing 7 identified species (173761, exchange); 100 Diptera from Solomon Island (175-319); 12 flies, representing 8 species, 5 of them by holotypes (176341); (See also under Benson L. Quisenberry.)

JANSE, Dr. OLOV R. T., Washington, D. C.: Archeological objects from China (Tsin, Han, Six, Tang, Song, and Chou Dynasties), Cambodia, and Indo-China, purchased in the Orient and lent to the Museum for an indefinite period by Dr. Janse, 149 specimens (174598, loan).

JANSSEN PIANO Co., New York, N. Y.: Bicycle made of laminated wood to preserve critical materials in World War II (173992).

JARDIN BOTANIQUE DE L'ÉTAT, Brussels, Belgium: (Through Dr. W. Robyns) 100 plants from the Belgian Congo (176271, exchange).

JAUZZI, RONALD, Danbury, Conn.: 3 lithiophyllite with undetermined mineral, from Danbury (173760).

JELLISON, Dr. WILLIAM L., Hamilton, Mont.: 5 marten skulls (175497). (See also under Bombay Natural History Society and Federal Security Agency, United States Public Health Service, Hamilton, Mont.)

JENKINSON, J. W., Washington, D. C.: 8 specimens of minerals, including covellite from Butte, Mont., steel galena from Aspen, Colo., and native silver from Ontario, Canada (174040).

JIMÉNEZ, Dr. JOSÉ DE JESÚS, Santiago, Dominican Republic: 411 plants from Dominican Republic (173729, 174430, 174472, 174824, 175332).

JOHNS HOPKINS UNIVERSITY, Baltimore, Md.: (Through Dr. Harold E. Vokes) 989 type or figured specimens of Tertiary plants from the United States and elsewhere and 865 unstudied plant fossils, mostly from South and Central America (175348, exchange).

Neurological Laboratory: Brain of Dr. George E. Hale (175689).

School of Hygiene and Public Health:
(Through Dr. Lloyd E. Rozeboom)
1 fly (175494); 2 flies from Colombia (175781).

JOHNSON, H. H., Rochester, N. Y. (See under Eastman Kodak Co.)

JOHNSON, Dr. HELGI, New Brunswick, N. J.: 125 Ordovician limestones from Newfoundland (175542).

JOHNSON, Dr. MARTIN W., La Jolla, Calif.: 827 marine invertebrates, together with 1 coral, 38 mollusks, echinoderms, and 40 fishes (175351).

JOHNSTON, EDWARD C., Seattle, Wash.: 34 mollusks from St. Paul Island, Alaska (174345).

JONES, Dr. FRANK MARTIN, Wilmington, Del.: 6 specimens of lepidopterous material (175015).

JONES, JOHN C., Washington, D. C.: 8 insects and 6 small toads from Long Island (174570).

JUDD, NEIL M., Washington, D. C.: 1 flying squirrel with nest and 4 young from Silver Spring, Md. (173926).

JUDSON, SHELDON S., Cambridge, Mass.: Archeological material and 1 human skeleton collected in 1943-44 at various sites on Adak Island, Aleutians (174265).

JUNGE, CARLOS, Concepción, Chile: A small collection of miscellaneous insects from Chile (172361).

JUNGE, Dr. G. C. A. (See under Rijksmuseum van Natuurlijke Historie, Leiden, Holland.)

JUSTICE, DEPARTMENT OF, *Federal Bureau of Investigation*, Washington, D. C.: Skull, lower jaw, and nearly complete skeleton of a male Indian from near Reading, on the Thule River, Calif. (175716).

KAINEN, JACOB, Washington, D. C.: 1 etching on parchment by Nicholas François Chiffart, entitled "Eaux Fortes Nouvelles, 1879"—introductory etching to a set of prints (173701); a book, "A Little Book of London," by Joseph Pennell, with 25 rotogravure illustrations after his etchings (174089); 1 engraving in color, "Crested Bird," by Sue Fuller (175-511).

KANSAS, UNIVERSITY OF, Lawrence, Kans.: (Through Dr. R. H. Beamer) 12 bugs representing 6 species, 2 by 4 paratypes and 1 by 2 parallotypes (171408, exchange); 4 insects (174-572); (through Ronald L. McGregor) 32 plants from Kansas (174549).

KARTMAN, LEO, Los Angeles, Calif.: 88 parasitic worms (173047).

KAWANANAKOA, Princess ABIGAIL W. (deceased): (Through G. S. Waterhouse) Collection of ethnological

specimens from Hawaii, comprising 4 feather capes, 3 wooden bowls, 1 mat, and 1 tapa (170851, bequest).

KEARNEY, Dr. T. H., San Francisco, Calif.: 1 plant from Arizona (173971).

KEELER, EVERETT W., West Bridgewater, Mass.: Earthenware figurine, fragmentary, of Tarascan manufacture, from Mexico (175679).

KELLY, Dr. A. W., East Lansing, Mich.: 4 gastropods from the Devonian of Michigan (175772).

KELLEY-KOETT MANUFACTURING CO., Covington, Ky.: 1 "Grosse Flamme" X-ray machine of 1904 with tube stand and tube (175394).

KELLOGG, Dr. REMINGTON. (See under Smithsonian Institution, National Museum, collected by members of the staff.)

KEMPER, Mrs. LILLIAN ENTWISLE, Washington, D. C.: 1 embroidered satin picture worked in chenille and silk with painted portraits and sky, dating from about 1700 (175346).

KENDALL MILLS, Walpole, Mass.: 4 samples of Webril, an unwoven textile cloth (174990).

KENT, DOUGLAS H., London, England: Plant from England (175423).

KENTUCKY DEPARTMENT OF HEALTH, Louisville, Ky.: (Through Philip H. Harden) 1 fly larva (174553).

KEPNER, Prof. WILLIAM A., Charlottesville, Va.: 24 mollusks from Charlottesville, Va. (174033).

KILLGORE, Lt. Col. EDWARD W., Washington, D. C.: 1 Model No. "O" graphic camera (174852).

KILLIP, E. P., Washington, D. C.: 6 ethnological specimens from Venezuela collected by Dorothy Allers Kamen-Kaye, 1941-43 (174942); insect from Brazil (175709); 95 plants from Colorado and New York (176268).

KIMBALL, S. L., Weaverville, Calif.: 214 marine shells from Guam and Okinawa (175431).

KING, Mrs. ARCHIBALD, Washington, D. C.: A fossil premolar of a peccary from Scientists Cliffs, Calvert County, Md. (174714).

KING, Col. WILLARD V., Orlando, Fla.: 129 specimens of mosquito material comprising 67 pinned adults, 62 slides (genitalia, tarsal claws, larvae, and pupae) (174043); collection of mosquitoes, including holotypes, paratypes, slides, etc., from New Guinea (175495).

KING, WILLIAM H., Washington, D. C.: A reed hook, comb, and scissors used by the donor in weaving cotton cloth on a power loom (174014).

KINTER, Sgt. RALPH H., Lemoyne, Pa.: 102 plants from Aleutian Islands (171815).

KIPLINGER WASHINGTON AGENCY, Washington, D. C.: 49 stereoscopic photographs of the series of bronze statuettes entitled "The Living Hall of Washington, 1944" and 1 stereoscope (174016).

KIRK, Dr. EDWIN, Washington, D. C.: 2 crinoids, holotype and paratype from the Tichenor limestone (Hamilton) of Kashong Creek, near Bellona, N. Y. (173647); 24 fossil brachiopods and 1 crinoid from the Silica shale of northern Ohio, and 1 crinoid from the Onondaga limestone of New York (174413); 1 etching, "La Rue des Toiles, Bourges," by Charles Meryon (176152).

KLASTERSKY, Dr. IVAN. (See under Muséum Nationale Pragae.)

KLEINPETER, HUBERT L., 3d. (See under Richard L. Hoffman.)

KNERR, GRACE, Bradford, Pa.: Band of woven seed beads obtained by the donor's father about 70 years ago at Bradford and said to have been made by Indians near Salamanca, N. Y., for a white child (175498).

KNIGHT, Lt. Comdr. KENNETH L. (See under Navy Dept.)

KNOCH, Mr. and Mrs. PRESTON, Grand Junction, Colo.: 140 fishes, 1 toad, and 1 frog from Colorado collected between April 23 and June 21, 1946 (173732); 132 fishes and invertebrates collected in creeks, etc., in Montrose and Mesa Counties, Colo., in the summer of 1946 (175125).

KNULL, Prof. J. N., Columbus, Ohio: 2 beetles new to the collection (174041).

KOCH, H. J., Somerset West, Union of South Africa: 1 mollusk from Cape Province, South Africa (175444).

KOHLS, Dr. GLEN M. (See under Federal Security Agency, U. S. Public Health Service, Hamilton, Mont.)

KOMP, Dr. W. H. W., Ancon, Canal Zone: 6 mosquitoes from Jamaica, Cuba, and Bolivia (174900); 7 insects from Panama, Jamaica, and Ancon, and 2 brachiopods (174956); 17 fishes, mollusks, and marine invertebrates (176217).

KOSOFF, A. (See under Numismatic Gallery.)

KRAMER, KARL O., Coral Gables, Fla.: 57 shrimps, 2 isopods, 1 amphipod, and 2 anomurans, collected by donor and H. D. Doochin (176380).

KRAPOVICKAS, ANTONIA, Buenos Aires, Argentina: 75 plants from Argentina (174048).

KRAUSS, N. L. H., Honolulu, Hawaii: 11,552 individual insects and 29 vials of insects, 2 sowbugs, 14 peripatuses, 2 fishes, 1 crab, 3 oysters, and 5 earthworms from Panama and Canal Zone (174185, 174510, 174768, 174974,

175037, 175647); 8,000 miscellaneous insects collected in Mexico, Kansas, Missouri, California, and Texas (176277).

KENOV, Dr. E. L., Moscow, U. S. S. R. (See under Academy of Sciences of U. S. S. R.)

KROMBEIN, Dr. KARL V., Washington, D. C.: 2 insects (176364).

KREUKOFF, BORIS A., New York, N. Y.: 1 plant (176263).

KEYGER, Dr. J. P., Flintinge, Denmark: (Through Dr. Adam Böving) 15 tubes of beetles including adults and larvae, representing 11 species (173423); 50 insect larvae representing 12 species of beetles (173792); 158 insect larvae representing 25 species of beetles (173793); 24 vials of beetle larvae (175320).

KUTTER, Dr. H., Berne, Switzerland: 320 European and North African ants, representing 110 species, 9 of them by paratypes (173332, exchange).

KWASAN OBSERVATORY, Kyoto, Japan: Complete individual of the Tane meteorite, weighing 595 grams (174684, exchange).

KYOTO IMPERIAL UNIVERSITY, Kyoto, Japan: 6 rare-earth minerals from Japan (174792, exchange).

LACEY, LIONEL, New Rochelle, N. Y.: 29 beetles, including 19 named species and a paratype of 4 different species (174520).

LAHNUM, Lt. W. W., San Francisco, Calif.: 14 rodents collected at Guiuan and Calicoan, Samar, P. I. (173549).

LAKELA, Dr. OLGA, Duluth, Minn.: 11 grasses from Minnesota (173323).

LAM, GEORGE N. (See under Mahogany Association, Inc.)

LAMM, DONALD W., Washington, D. C.: 10 bird skins from Brazil (175935).

LAMORE, DONALD, Silver Spring, Md.: 6 mammals from Maryland and Virginia (175026).

LANDACRE, PAUL, Los Angeles, Calif.: 35 wood engravings for special exhibition during April 1947 (175980, loan).

LANG, W. B., Washington, D. C.: 11 land and fresh-water mollusks from New Mexico (149061); 5 fresh-water shells from the bed of the Pecos River, N. Mex. (176158).

LANGE, Dr. W. HARRY, Davis, Calif.: 2 moths (174261, exchange).

LANHAM, U. N., Chicago, Ill.: 4 bees of 3 species, one new to the collections (173619, exchange).

LASSMANN, Dr. G. W., Jalapa, Veracruz, Mexico.: 30 specimens of mosquito material (174519).

LAZZARI, PIETRO, Washington, D. C.: 26 drypoints by Pietro Lazzari for special exhibition during March 1947 (175510, loan).

LEECH, HUGH B., British Columbia, Canada: 27 beetles (176035).

LEESON, H. S. (See under London School of Hygiene and Tropical Medicine.)

LEHIGH UNIVERSITY, Bethlehem, Pa.: (Through Dr. Bradford Willard) 38 Devonian (Oriskany) brachiopods from Pennsylvania (174843, exchange).

LEON TYPEWRITER AND ADDING MACHINE Co., Washington, D. C.: 1 rotogravure reproduction of Lionel Barrymore's etching "Quiet Waters" (174987).

LESTER, WARREN S. (address unknown): 1 alcyonarian (175287).

LEWIS, Maj. B. R., Washington, D. C.: 2 arrows, picked up in the fort after the Battle of Boonesborough, Ky., in 1778 (176370).

LEWTON, Dr. F. L., Takoma Park, Md.: 1 plant (173663).

LEYVA, CARLOS J., Pluma Hidalgo, Mexico: 2 plants from Mexico (175720, 176056).

LIBRARY OF CONGRESS, Washington, D. C.: Nazi memorabilia of the period of World War II (174785); collection of 37 West African ethnological specimens obtained by Mrs. French Sheldon, presumably before 1905 (176312).

LIGHT, Prof. S. F., Berkeley, Calif.: 12 amphipods (174307); 121 marine invertebrates, 400 mollusks, echinoderms, and 3 fishes (175282).

LILLY & COMPANY, INC., Indianapolis, Ind.: 39 pharmaceutical preparations (173800).

LIMA, Dr. A. DA COSTA. (See under Escola Nacional de Agronómica.)

LIMBACH, RUSSELL T., Middletown, Conn.: 38 lithographs for special exhibition January 6 through February 2, 1947 (174853, loan).

LINCOCOME, Prof. DAVID RICHARD, Lexington, Ky.: 280 mollusks from near Lexington (174080); 30 fresh-water snails (176159).

LINDER, Dr. FOLKE, Uppsala, Sweden: 333 crustaceans from various localities (174129, part exchange). (See also under Dr. O. Sjoberg.)

LINDQUISTS OF ONAMIA, MINN., St. Paul, Minn.: (Through Carl W. Lindquist) Mechanical rowing device that permits the rower to face in the direction of travel (175651).

LINDSEY, ALTON A., Albuquerque, N. Mex.: 15 amphipods (176359).

LINSDALE, Dr. J. M., Monterey, Calif.: 6 crayfishes from Carmel River, Calif. (176280).

LIPOT, SIGEL (deceased): 4 small carvings from near Cuzco, Peru (174599).

LITTLE, Dr. and Mrs. ELBERT L., Washington, D. C.: 52 grasses from Colombia (174203).

LIVINGSTON, ROBERT B. (See under University of Missouri).

LLOYD, HOYES, Ottawa, Canada: 9 birds from Canada (173975).

LOCHMAN, DR. CHRISTIAN, South Hadley, Mass.: 7 type specimens of Mississippian graptolites from near Deadwood, S. Dak., and 7 additional specimens (174921, exchange); 1 slab of Ordovician crinoids from Goat Island, Georgian Bay, Ontario (176320).

LOCKE, JUSTIN N., Washington, D. C.: 59 pictorial photographs for special exhibition during May 1947 (176214, loan).

LOCKHART, W. E., Lander, Wyo.: Specimens of nephrite from Fremont County, Wyo. (175736).

LOCKLIN, CHARLES R., Detroit, Mich.: 275 Tertiary fossils from Florida (169772).

LOEBLICH, DR. A. R., JR., Washington, D. C.: Approximately 100,000 invertebrate fossils (173694); 1,200 mollusks, 37 Echinodermata, 2 barnacles, and 6 corals, from Okinawa (174916). (See also under DR. G. ARTHUR COOPER AND SMITHSONIAN INSTITUTION, NATIONAL MUSEUM, collected by members of the staff.)

LOEBLICH, MRS. ALFRED R., JR., Washington, D. C.: 31 samples of microfossils of Lower Cretaceous, Eocene, Oligocene, and Miocene ages from Texas, Alabama, Louisiana, Oklahoma, Mississippi, and California (174681); 196 Lower Cretaceous Foraminifera from Oklahoma and Texas (50 species) (174841).

LOEBLICH, DR. A. R., JR., DR. G. A. COOPER, and families, Washington, D. C.: 650 Lower Devonian fossils from Maryland (174143); 21 trilobites and brachiopods from Upper Cambrian and early Ordovician limestones near Frederick, Md. (174410).

LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE, London, England: (Through H. S. Leeson) 51 *Anopheles* mosquitoes from the Old World, comprising 26 species of which 23 are new to the Museum's collection (173809, exchange).

LONGWELL, L. H., Elmhurst, Ill.: 1 pictorial photograph entitled "Morning Charm" (176238).

LONSDALE, DR. JOHN T. (See under University of Texas, Bureau of Economic Geology.)

LOS ANGELES COUNTY MUSEUM OF HISTORY, SCIENCE, AND ART, Los Angeles, Calif.: (Through DR. JOHN A. COMSTOCK) 6 moths with attached cocoons and pupa cases (174693).

LOUKASHKIN, ANATOLE S., San Francisco, Calif.: Skin of a warbler from Korea (178789).

LOVE, PROF. R. MERTON. (See under University of California, College of Agriculture.)

LUETH, FRANCIS X. (See under Department of Conservation, Montgomery, Ala.)

LUTZ, BERTHA, Rio de Janeiro, Brazil: 8 frogs from Brazil (173831, exchange).

LYNCH, DR. JAMES E., Seattle, Wash.: A collection of amphipods, isopods, and cumaceans from Puget Sound (173540); 7 lots of phyllopod material (173986).

MACCIAVELLO, DR. ATILIO. (See under Pan American Sanitary Bureau.)

MACCORD, HOWARD, Greenville, Va.: 3 bats from Minnesota (173814); archaeological material from mound and village site near Itta Bena, Miss., and Romney, W. Va. (175747).

MACE, JERRY, Washington, D. C.: 1 beetle from District of Columbia (173621).

MACGINITIE, DR. G. E., Corona del Mar, Calif.: 33 copepods (175842). (See also under California Institute of Technology.)

MACK-INTERNATIONAL MOTOR TRUCK CORP., New York, N. Y.: 3 paintings by Peter Helck for special exhibition March 3 through April 27, 1947 (175340, loan).

MAHOGANY ASSOCIATION, INC., Chicago, Ill.: (Through George N. Lam) 2 plants from Pennsylvania (174275).

MALDONADO C., JENARO, Ponce, Puerto Rico: 53 bugs (175315, exchange).

MALKIN, BORYS, Eugene, Oreg.: 7 insects (175977).

MALLINCKRODT CHEMICAL WORKS, St. Louis, Mo.: A sample of Santonin crystals, N. F. VII., for materia-medica exhibit (173868).

MALLORY, LESTER DEWITT, Washington, D. C.: 1 wooden bow and 11 arrows collected in Mexico (173644).

MANN, DR. WILLIAM M., Washington, D. C.: A ceremonial dancing hat of the Aymara Indians, La Paz, Bolivia, collected by the donor in 1922 (173708).

MANSFIELD, MRS. HOWARD, New York, N. Y.: Photograph of dirigible balloon invented and owned by Frederick A. Gower in France, 1884 (176374).

MARI, J. GINER, Valencia, Spain: 96 wasps (175314, exchange).

MARTINI, TOMÁS L., Buenos Aires, Argentina: 706 fishes from Argentina (130-568).

MARK, ANNA SALLADA, Arlington, Va.: A specimen of native copper from Cornwall Ore Hills, Lebanon County, Pa. (174258).

MARKELL, EDWARD K., Berkeley, Calif.: Type specimen of a trematode (174-183).

MARKS, ELIZABETH N., Brisbane, Queensland: 16 mosquitoes—2 new species represented by 2 paratypes each (174-984).

MARSHALL, ERNEST B., Laurel, Md.: 35 skulls of mammals (176037).

MARSHALL, Prof. NELSON, Chapel Hill, N. C.: Many males, females, and egg masses of a fly, collected on barnacles in Biscayne Bay, Fla. (173928).

MARTIN, ERNEST C., Spring Hill, Ala.: 6 muskrats (174115).

MARTÍNEZ, Prof. MAXIMINO, Mexico, D. F.: 98 plants from Mexico (173-816, 174434).

MASON, Dr. JOHN, Philadelphia, Pa.: 43 Cretaceous invertebrates from Venezuela (174415); about 400 Lower Permian invertebrate fossils from the Providence Mountains of southern California (174517).

MASUTOMI, Dr. K., Kyoto, Japan: 14 Japanese minerals, including abukumulite, szabelyite, and others (174794, exchange).

MATHESON, Dr. ROBERT, Ithaca, N. Y.: 1 fly from New Georgia, Solomon Islands (175316).

MATTHEWS, RANSOM, Sierra Madre, Calif.: Clockwise rotating 6-cylinder Eisemann magneto, model E. M. A. 16, with automatic spark advance, patented Aug. 25, 1914 (175128).

MATTINGLY, P. F. (See under British Government, British Museum.)

MAXON, Dr. WILLIAM R., Washington, D. C.: 20 sets of eggs of North American birds (175426).

MAXWELL, MARY E., Washington, D. C.: Antique gold and enamel bracelet encrusted with sapphires and rubies, obtained by the donor in Jaipur, India (173634); lavaliere, with head of Mercury carved of milky quartz; black onyx locket with floral pattern of diamonds, and chain, brought from Scotland before 1770; and a Daughters of the Confederacy pin that belonged to donor's aunt (175336).

MAYO, CHARLES A., Jr., Provincetown, Mass.: 6 tunics (174365).

MCALISTER, R. F., Columbus, Ohio: Marcasite from near Egypt, Ross County, Ohio (175930).

McCALLUM, M/T Sgt. LEROY M., Jr., New Bern, N. C.: A model, 1/16th size, of the U. S. Navy Fighter airplane, Bell XFL-1, the *Airabonita*, carrier-based version of the *Airacobra* (174766, loan).

McCLINTOCK, ELIZABETH. (See under University of California at Los Angeles.)

McCONNELL, R. G., Niagara Falls, N. Y.: 2 concretions of marcasite enclosed within coal (175072).

McCRARY, O. F., Raleigh, N. C.: 1 plant from North Carolina (173864). (See also under North Carolina State College of Agriculture, Extension Service.)

McCURRAH ORGANIZATION, INC., New York, N. Y.: 24 Scottish clan tartan specimens woven of silk and wool Kerry poplin (175129).

McDONALD, ESTATE OF EDWARD D., Shaker Heights, Ohio: (Through Dr. J. G. Francelmont) 995 plants from United States, Canada, and Kiska Island, also 585 specimens of North American Hymenoptera (173730); (through Dr. Ross Arnett) 1,165 plants (174105).

McDOUGALL, Dr. W. B. (See under Department of the Interior, National Park Service.)

McELVARE, ROWLAND R., Port Washington, L. I., N. Y.: 18 Lepidoptera (175607).

McEWEN, A. R., New York, N. Y.: 1 microengraving machine built for Alfred McEwen by the Rev. J. C. Crawford after the original machine invented by W. Peters in London in 1852; 1 Fasoldt ruling machine for making test rulings (1860) and 1 Rogers ruling machine (173843).

McGREGOR, RONALD L. (See under University of Kansas.)

McKEE, Prof. EDWIN D., Tucson, Ariz.: A slice of the Weaver, Maricopa County, Ariz., meteorite (172539).

McKENZIE, GEORGE P., San Marino, Calif.: 8 ladybeetles including holotype and 2 paratypes (175526, exchange).

McKENZIE, R. A., Chatham, New Brunswick: 18 fishes from near Halifax, Nova Scotia (174606).

McKESSON AND ROBBINS, INC., New York, N. Y.: 4 lithograph illustrations of medical subjects (174152).

McKINLEY, T. W., Falls Church, Va.: 3 scorpions and 10 miscellaneous insects from Guayaquil, Ecuador (176146).

MCCLANE, WILLIAM, Welaka, Fla.: 33 fishes from Florida (175467).

MCCLANE, WILLIAM M., Gainesville, Fla.: 1 slide of an anthurid isopod (174187).

MC LAUGHLIN, EDWARD DANIEL, Washington, D. C.: Pottery vessel from the site of Tiahuanaco, Bolivia (175628).

McMILLIN, Prof. HARVEY, Seattle, Wash.: 1 mollusk from Peru (174734).

MEDCOF, Dr. J. C., St. Andrews, New Brunswick: Approximately 30 copepods (173984); 1 lot of copepods on gills of clam (175454).

MEISTER, FRANK, Kansas City, Mo.: 50 pictorial photographs for exhibit during February 1947 (174817, loan); 3 pictorial photographs (175680).

MENZIES, ROBERT. (See under College of the Pacific.)

MERCK & Co., New York, N. Y.: 6 specimens of cinchona alkaloids and alkaloidal salts (175309).

MEREDITH, Capt. S. B., Philadelphia, Pa.: A flying model tractor monoplane, rubber powered, embodying an interconnected control system, 20th-century period (172854).

MEYER, Dr. M. C., New Brunswick, N. J.: Holotype of a new species of leech (173311).

MICHENER, Dr. D. C., New York, N. Y.: 6 bees of 2 species, including paratype of one (174422, exchange).

MICHIGAN, UNIVERSITY OF, Ann Arbor, Mich.: (Through Dr. Reeve M. Bailey) 22 fishes from Río de la Pasión, Guatemala (173483, exchange); 249 plants from Hongkong (174047, exchange); 5 ferns from Mexico (174550, exchange); 17 wood specimens collected by Dr. W. R. Taylor, in 1946, on Bikini Atoll, Marshall Islands (176363).

MILLAN, Dr. ROBERTO. (See under Estación Experimental Nacional de Balcarce.)

MILLE, Rev. Dr. LUIS, Manabí, Ecuador: 11 plants from Ecuador (173885).

MILLER, Dr. A. K., Iowa City, Iowa: 125 Devonian fossils from Germany (175676, exchange).

MILLER, HARRY EDWARD, Stratford, Conn.: An exhibition specimen of steel-blue mica schist (173779); specimen of coccolite in marble from "Old Tungsten Mine," Long Hill, Fairfield County, Conn. (173909).

MILLER, RALPH G., Los Angeles, Calif.: 1,610 fishes, together with some amphibians and 1 lizard from Mexico and southern California (172405).

MILLER, Dr. ROBERT R. (See under Smithsonian Institution, National Museum, collected by members of the staff.)

MILLER, W. S., Altoona, Pa.: 27 reptiles and amphibians collected by the donor in Oaxaca, Mexico, in 1946 (173937).

MINER, JULIUS D., Monterey, Calif.: 10 insects found dead from fungus attack (173822).

MINISTERIO DE AGRICULTURA, Secção de Agrostologia, Rio de Janeiro, Brazil: (Through Dr. Jorge Ramos de Otero) 106 Brazilian grasses (175910, exchange).

MINISTERIO DE MINAS Y PETRÓLEOS, Bogotá, Colombia: (Through Prof. José Royo y Gómez) 15 minerals including a sample of parisite from the emerald mines of Muzo, Colombia (174492, exchange).

MINISTERIO DE TRABAJO, HIGIENE Y PREVISIÓN SOCIAL, Pasto, Colombia: (Through Dr. Juan A. Montoya) 2 black rats from Pasto (175084).

MINNESOTA, UNIVERSITY OF, Department of Botany, Minneapolis, Minn.: (Through Dr. R. M. Tryon, Jr.) 22 grasses (176202); 63 plants from Minnesota (176272, exchange).

MIRHJ, JOHN. (See under Thane Riney.)

MISSOURI, UNIVERSITY OF, Columbia, Mo.: (Through Robert B. Livingston) 10 grasses from Colorado (175186, exchange).

MISSOURI BOTANICAL GARDEN, St. Louis, Mo.: Grass from Colorado (174361); grass from Guatemala collected by Dr. Edgar Anderson (175450, exchange); 5 plants from Brazil (176297, exchange).

MITCHELL, CORNELIUS, New York, N. Y.: (See under J. C. Fair.)

MITTLEMAN, M. B., New Rochelle, N. Y.: 2 salamanders from Louisiana (175297).

MOECK, ARTHUR H., Milwaukee, Wis.: 2 Lepidoptera (167874).

MOHR, DR. CARL O., Urbana, Ill.: (Through L. L. Buchanan) 1,530 miscellaneous insects, about 1,500 of which are beetles of various families, collected while in military service, mostly in New Guinea and the Philippines (173422).

MOLDENKE, DR. HAROLD N., New York, N. Y.: 10 grasses from Ecuador (174624); 4 plants from Mexico (175328).

MOLINA, HAYDEE MONGE, San José, Costa Rica: A small collection of insects from Costa Rica (173303).

MONTANA STATE COLLEGE, Bozeman, Mont.: 38 grasses from Montana, Arizona, etc. (174495); (through Dr. W. E. Booth) 5 plants from Switzerland (174970, exchange).

MONTE, DR. OSCAR. (See under Instituto Biológico.)

MONTERO O., Prof. GILBERTO, Temuco, Chile: 29 mosses from Chile (175111).

MONTOYA, DR. JUAN A. (See under Ministerio de Trabajo, Higiene y Previsión Social.)

MOORE, DR. A. R., Eugene, Oreg.: 1 fish from Bay of Rio, Brazil (173874).

MOORE, THOMAS M. (See under Navy Department, Office of Research and Inventions.)

MORENO, DR. ABELARDO, Habana, Cuba: 3 masked ducks (166904).

MORRISON, DR. J. P. E., Washington, D. C.: A collection of miscellaneous natural-history specimens from Virginia, including mollusks, insects, Crustacea, fishes, and reptiles (175999).

MOORE, TOM J., New York, N. Y.: 12 portrait paintings in oil on board of Indian subjects from the Shoshone, Flathead, Kootenai, and Blackfoot tribes (176222).

MORSE INSTRUMENT Co., Hudson, Ohio: (Through Otis E. Burgess) 1 Morse A-14 contact printer (175356).

MORTON, C. V. (See under Smithsonian Institution, National Museum, collected by members of the staff.)

MUESEBECK, C. F. W. (See under U. S. Department of Agriculture, Bureau of Entomology and Plant Quarantine.)

MUMFORD, NORMAN E., Seattle, Wash.: 1 Pathé Frères motion-picture projector, patented 1911 (174052).

MUNRO, Dr. H. K. (See under Department of Agriculture and Forestry, Pretoria, Union of South Africa.)

MUNRO, Dr. IAN S. R. (See under Council for Scientific and Industrial Research.)

MUNZ, Dr. P. A. (See under Bailey Hortorium.)

MURCHISON, ERNEST W., Washington, D. C.: 1 gray fox (174525).

MURDOCH, Prof. JOSEPH, Los Angeles, Calif.: 2 specimens of the new mineral nuevite from Nuevo, Calif. (175387).

MURDOCK, PAUL J. (See under War Department, Chief Signal Officer.)

MURIE, OLAUS J., Moose, Wyo.: 7 pronghorn antelopes and a sample of local vegetation from Wyoming (174317).

MURRAY, Lt. Comdr. T. B. (See Navy Department, Naval Medical Research Unit No. 2.)

MUSEO DE LA PLATA, La Plata, Argentina: 42 grasses (174825, exchange).

MUSÉUM NATIONAL D'HISTOIRE NATURELLE, Paris, France: (Through Dr. Jean Roger) 179 Jurassic and Cretaceous brachiopods from France (173-443, exchange).

MUSÉUM NATIONALE PRAGAE, Prague, Czechoslovakia: (Through Dr. Ivan Klastersky) 150 plants (176073, exchange).

NARAMORE, W. W., Bridgeport, Conn.: (Through Dr. C. Wythe Cooke) 14 Miocene (Silex) mollusks (175972).

NATIONAL BROADCASTING Co., INC., Washington, D. C.: Television transmitter tube, RCA899, in service in W2XBS, June 31, 1936, to August, 1946 (175-029).

NATIONAL HERBARIUM, Sydney, New South Wales: 1 plant (174404, exchange).

NATIONAL SERIGRAPH SOCIETY, New York, N. Y.: (See under Leonard Pytlak.)

NATURHISTORISCHES MUSEUM, Vienna, Austria: (Through Dr. F. Petrak) 525 lower cryptogams (176075, exchange).

NATURHISTORISKA RIKSMUSEET, Stockholm, Sweden: 1,225 plants from Ecuador (176154, exchange); (through Dr. A. Westergaard) 1 coral from the Silurian of Gotland (175907, exchange).

NAVAJAS, EDUARDO, São Paulo, Brazil: 8 beetles from Brazil (174001, exchange).

NAVY DEPARTMENT, Washington, D. C.: A collection of 23 paintings entitled "Artists' Interpretation of 'Operation Crossroads' Bikini," by Milton R. Marx, Grant Powers, Charles Bittinger, and Arthur Beaumont (174357, loan); (through Dr. F. R. Fosberg) 268 plants from Japan (175920);

Naval Medical Research Unit No. 2, Washington, D. C.: (Through Lt. Comdr. Kenneth L. Knight) 2,796 pinned mosquito adults and 2,644 slides of mosquito larvae representing 32 species (173762); (through Lt. Comdr. T. B. Murray) 29 mammals and 28 birds from Truk, Caroline Islands (173783); (through R. T. Abbott) 1,000 fresh-water snails from the western Pacific area (174439); 500 lots, 25,000 specimens, of mainly land and fresh-water mollusks from China, Philippines, and the Marianas (175988); (through Prof. David G. Frey) 2,176 fishes from Guam, Marianas Islands, and Yap Island, Micronesia, collected by Dr. Frey in December 1945 and February 1946, respectively; also 3 jars of mollusks and 1 crab (176113).

Naval Medical Research Unit No. 3, Cairo, Egypt: (Through Naval Medical School, Bethesda, Md.) 160 mammals from the vicinity of Cairo collected by Ensign P. Quentin Tomich (175476, 175663); 69 mammals from the vicinity of Cairo collected by Ensign P. Quentin Tomich (175663).

Navy Medical School, Bethesda, Md.: 18 albino rats collected at Washington, D. C. (173795). (See also under Naval Medical Research Unit No. 3.)

Office of Research and Inventions, Naval Research Laboratory, Washington, D. C.: (Through Thomas M. Moore) 1 Bell and Howell 16-mm. gun-type motion-picture camera used for photographing the earth from a German V-2 Rocket at White

Sands, N. Mex., Oct. 10, 1946, and 5 8-by-10 photographs of the experiment (174698).

Special Devices Division, Washington, D. C.: A collection of aircraft models produced during World War II by Special Devices Division, ORI, Bureau of Aeronautics and the Technical Air Intelligence Center, and embodying detailed information of vital importance at the time regarding types used by Germany, Japan, and Italy (167748); a model $\frac{1}{16}$ size of the Navy Grumann Fighter, type F6F, *Hellcat* used in World War II (174735).

U. S. Naval Antarctic Expedition, Washington, D. C.: 31 birds, 4 mammals, 3 fishes, 1 lot of fish eggs, and 66 miscellaneous marine invertebrates (176412).

NEAL, MARIE C. (See under Bernice P. Bishop Museum.)

NEBRASKA, UNIVERSITY OF, Lincoln, Nebr.: (Through Prof. O. S. Bare) 2 paratypes of an insect (176338).

NELSON, DR. L. A., El Paso, Tex.: 6 holotypes and 3 paratypes of Pennsylvania gastropods (173821); approximately 178 assorted Permian invertebrate fossils from west Texas (174456); 75 fossil echinoderms from the Lake Valley formation, New Mexico (175489, exchange).

NEUMAN, ROBERT B., Baltimore, Md.: 14 valves of a Lower Ordovician brachiopod from Cades Cove, Tenn. (175586).

NEW YORK BOTANICAL GARDEN, New York, N. Y.: 91 plants from Ecuador (173948, 173951, 173970, 174025, 174069, 174219, exchange); 771 plants from Nevada (173767); 2 plants from Surinam (174202); 11 plants from Brazil (174728, 174792); 189 mosses from Georgia (175109); 2 plants from Ecuador and Hawaii (175118); 7 plants (175119); 239 plants from western United States (175360); 165 mosses collected by F. E. Wynne in Ohio (175923); 425 plants from Guiana (175925, exchange).

NEW YORK GRAPHIC SOCIETY, New York, N. Y.: 1 collotype reproduction of Grant Wood's painting "Spring Landscape," printed by New York Graphic Society (175427).

NEW YORK STATE COLLEGE OF FORESTRY, Syracuse, N. Y.: 64 plants from the United States (173766, exchange); 182 wood samples of trees of the United States collected under Wood Technology Project I (176003, exchange).

NEW YORK STATE MUSEUM, Albany, N. Y.: 2 brachiopods from the Devonian of the Falkland Islands (175306).

NEW YORK ZOOLOGICAL SOCIETY, New York, N. Y.: (Through Dr. William Beebe) Several bird bones, 2 moths, and 2 fossil crab claws (174536); (through Jocelyn Crane) 4 crabs (174955).

NICHOLS, DR. J. T. (See under American Museum of Natural History.)

NORTH, MRS. N., Washington, D. C.: The James Albert North collection of birds' eggs (962 eggs) (175936).

NORTH CAROLINA DEPARTMENT OF AGRICULTURE, Raleigh, N. C.: (Through Dr. O. L. Wray) 1 fly, holotype (175990).

NORTH CAROLINA STATE COLLEGE OF AGRICULTURE, Extension Service, Raleigh, N. C.: (Through O. F. McCrary) 1 grass from North Carolina (173363).

NORTH DAKOTA, UNIVERSITY OF, Grand Forks, N. Dak.: (Through Dr. George C. Wheeler) 3 insects (175719, 176034).

NORTH DAKOTA AGRICULTURAL COLLEGE, Fargo, N. Dak.: 8 grasses from North Dakota (175621, exchange).

NUMISMATIC GALLERY, New York, N. Y.: (Through A. Kosoff) Gold medalet commemorating the "Four Freedoms" (173913).

O'HARA, MRS. GRACE. (See under Dr. Emma Bormann.)

OHIO STATE UNIVERSITY, Columbus, Ohio: (Through Dr. John M. Wells) 127 Mesozoic brachiopods from Germany (175215, exchange).

OKLAHOMA, UNIVERSITY OF, Norman, Okla.: 2 corals from the Henryhouse (Silurian) formation of Oklahoma (174593).

OKLAHOMA AGRICULTURAL AND MECHANICAL COLLEGE, Stillwater, Okla.: (Through Dr. Robert Stratton) 1 plant (173924); 1 plant from Oklahoma (174466).

OLDROYD, H. (See under Dr. D. Elmo Hardy.)

OLIVER, SMITH HEMPSTONE, Washington, D. C.: 2 medals for bicycle racing won by Frederick Landing Oliver of Charlotte, N. C., in 1897 (175127, loan); a painting in color by Peter Helck for a special exhibit March 3 through April 27 (175531, loan).

OLOP, STEPHEN, Washington, D. C.: an unusually shaped iron-sand concretion from the District of Columbia (174897, exchange).

OMAN, DR. PAUL W. (See under Department of Agriculture, Bureau of Entomology and Plant Quarantine.)

OMWAKE, H. GEIGER, Durham, N. C.: 7 fragmentary bones of passenger pigeon (174368).

ONTARIO AGRICULTURAL COLLEGE, Guelph, Ontario: 56 plants, mostly grasses, from Ontario (174804, exchange).

OREGON STATE FLAX INDUSTRY, Salem, Oreg.: 3 flax samples including seed, ripened straw, and fiber (174703).

OSORNO-MESA, Dr. ERNESTO, Bogotá, Colombia: 6 samples of mosquito material, including type and paratype of a new species (176147).

OSSIANNILSSON, Dr. FREJ, Stockholm, Sweden: 5 bugs (173543, exchange); 31 insects (175329, exchange).

OWENS, ROBERT I., Ciudad Trujillo, Dominican Republic: 120 land, freshwater, and marine shells (173922).

OXFORD UNIVERSITY MUSEUM, Oxford, England: 58 insects from the Cayman Islands (173880).

PACIFIC MILLS, New York, N. Y.: Samples of cotton fabrics and fabric applications showing dyeing, printing, and finishing and 1 wool and rayon fabric in the original design, 2 zinc plates and an engraved copper roller; a chart showing the processes in the production of cotton fabric; 7 dyestuff samples and 7 photographs of textile mills and mill processes (175446).

PALMER, ERNEST J., Jamaica Plain, Mass.: 36 introduced land shells from Jamaica Plain (175123).

PAN AMERICAN SANITARY BUREAU, Washington, D. C.: 3 small mammals from Ecuador (172153); 26 rodents from Lancones, Department of Piura, Peru (174464); (through Dr. Atilio Maccavello) 31 rodents from the Department of Piura, Peru (175385).

PARKE, DAVIS & Co., Detroit, Mich.: 7 pharmaceutical preparations for addition to the therapeutic classification collection (173771); an exhibit of "medicinal forms" for the section of pharmacy (176335).

PARKER, DR. HARRY L., Montevideo, Uruguay: 2 skeletons of the South American stilt (173817).

PARKS, B. C., Beltsville, Md.: Incomplete skeleton of an adult male Indian from West Virginia (174580).

PARODI, DR. LORENZO R., Buenos Aires, Argentina: 12 grasses from Argentina (175114, exchange).

PARR, DR. A. E., New York, N. Y.: 2 crinoids from the Pennsylvanian of Illinois (175970, exchange).

PASKOW, H. M. (See under William V. Schmidt & Co., Inc.)

PATTEN, JOHN A., Brevard, N. C.: 2 sycamore warblers (173432).

PAYNE, DR. EUGENE H., Detroit, Mich.: 50 insects and 1 annelid worm from Brazil (173659).

PEARLMAN, B. (See under Projection Sales Co.)

PEARSE, DR. A. S., Durham, N. C.: 1 snake eel (174050); holotype, allotype, and paratype of a new species of isopod (175966).

PECHUMAN, DR. L. L., Lockport, N. Y.: 1 horse fly from Brazil (175203, exchange); 13 flies of 3 species (175862).

PEDERSEN, ASBJORN, Buenos Aires, Argentina: An individual meteorite of the de Salavina, Argentina, fall weighing 206 grams (172921).

PEDRICK, DR. T. B., Washington, D. C.: 8 samples of military uniform and accessories (175745).

PEEK & VELSOR, INC., New York, N. Y.: 1 specimen each of elder bark and flowers for the *materia-medica* collection (173867).

PENN, DR. GEORGE H., Ithaca, N. Y.: 67 shrimps and 5 amphipods (173778); 15 amphipods (173987).

PENNAK, DR. ROBERT W. (See under University of Colorado.)

PENNICK & Co., S. B., New York, N. Y.: 2 samples of crude drugs, viz, marigold flowers and mullein leaves (174208).

PENNINGTON, L. HERBERT, Washington, D. C.: An early audion triode tube (175863).

PENNSYLVANIA, UNIVERSITY OF, Philadelphia, Pa.: (Through Richard W. Pohl) 3 grasses from Virginia and Tennessee (174200, exchange); grass from Pennsylvania (174278).

PEPPERELL MANUFACTURING Co., Boston, Mass.: 4 crib blankets (173662); 4 pairs of bed sheets in four qualities, with matching pillow cases (174013).

PERKINS, JOHN U., Washington, D. C.: 1 collotype (artotype) by Harroun and Bierstadt after a landscape painting by Albert Bierstadt (176213).

PERRY, DR. STUART H., Adrian, Mich.: Sample of Atoka, Okla., meteorite weighing 475 grams. (174683); 4 meteorites from Mertzon, Tex.; Odessa "shale," Tex.; Hill City, Kans., and collection of Loyola University (174898). (See also under University of Arizona.)

PERRYGO, W. M., Oxon Hill, Md.: 2 rice rats from Oxon Hill (173812); 60 land shells from east court of Natural History Building of the Museum (176332). (See also under Smithsonian Institution, National Museum, collected by members of the staff.)

PETRAK, DR. F. (See under Naturhistorisches Museum.)

PHELPS, W. H., Caracas, Venezuela: 2 birds, a rail and a warbler, from Venezuela (171534); 3 birds from Venezuela, new to Museum collection (174573).

PHENICIE, CHARLES K. (See under Washington State Fisheries Laboratory.)

PHILIPPINE REPUBLIC, *Bureau of Health*, Manila; (Through Dr. F. E. Baisas) 10 pinned mosquitoes (176033).

PHILLIPS, Dr. Walter S. (See under University of Arizona.)

PHOTO RESEARCH CORP., San Fernando, Calif.: (Through John D. Farneman) 1 Norwood Director exposure meter (174601).

PHOTOVOLT CORP., New York, N. Y.: 1 Photovolt exposure photometer Model 200-A (174764).

PICKENS, A. L., Greenwood, S. C.: 4 plants from eastern United States (174403).

PICKETT, Mrs. PURL, Urundi, Congo Belge: 1 wormsnake from Usambara, Urundi, Congo Belge (173878).

PICKLE, Dr. BENTO José, São Paulo, Brazil: 22 plants from Brazil (173705).

PIERSON, ALBERT H., Washington, D. C.: Fine cotton baptismal robe with front panel elaborately embroidered in stitchery of the style used in the period 1830-40 (173715).

PINCKNEY, Miss PAULINE A., Washington, D. C.: Photographs of ships, figureheads, and carvings consisting of 75 mounted photographs, 147 unmounted photographs, and 21 printed proofs of line drawings (173714).

PITELKA, FRANK A. (See University of California, Museum of Vertebrate Zoology.)

PITTIER, Dr. H., Caracas, Venezuela: 1,186 plants from Venezuela (173498, 174576, 174579, 174909, 174957, 175924, 176299).

PITTS, WILLIAM B., San Francisco, Calif.: 1 strand of chrysoprase beads from Porterville, Calif., and 1 strand of orbicular jasper beads from Gilroy, Calif. (175305); 10 minerals including jade, jasper, bakerite, pricelite, etc. (175512, exchange).

PIZZINI, ANDREW, Washington, D. C.: 4 flatworms, 2 isopods, 4 vials of freshwater amphipods taken near Paris, France, August 1945 (172342); 78 crustaceans (175279, 175582, 175964).

PLETSCH, Dr. I. J., Bozeman, Mont.: 30 miscellaneous insects from the southwest Pacific (175313).

POHL, RICHARD W. (See under University of Pennsylvania.)

POND, WALTER F., Malvern, Ark.: 1 iron meteorite from near Harriman, Tenn., weighing 12.88 kilograms (175100).

PORTER, Dr. C. L. (See under University of Wyoming.)

PORTER, Sgt. HAROLD L., A. P. O., San Francisco, Calif.: 79 plants from Iwo Jima (174356).

PORTER, Capt. HOWARD J., Washington, D. C.: A barracuda bag, improvised life-saving equipment, used by Civil Air Patrol airmen in the early part of World War II (176372).

POST, E. J., Tampa, Fla.: 1 unusual fossil crustacean, 1 coral, and 3 worm-tube fillings from the silex bed, Tampa Bay, Fla. (174212); 21 fossil invertebrates from the silex bed, Tampa Bay, Fla. (175929).

POST, HOYT G., White Plains, N. Y.: 1 Maryland yellowthroat (176343).

POST OFFICE DEPARTMENT, Washington, D. C.: 2,843 foreign postage stamps as described in bulletins issued by International Bureau of the Universal Postal Union and 52 stamps issued by the Postal Administration of the Soviet Union (173314, 173405, 173772, 173834, 174302, 174610, 175263, 175624, 175806); 3 copies each of the 3-cent Honorable Discharge Emblem commemorative stamp and the 3-cent Tennessee Statehood commemorative stamp issued by the U. S. Post Office Department (173419); sheet of 50 Smithsonian commemorative 3-cent stamps autographed by Postmaster General Hannegan and 3 photographs relating to the design of the Smithsonian stamp, encased in a special folder and presented, through Secretary Wetmore, on the occasion of the 100th Anniversary of the founding of the Smithsonian Institution (173510); 3 copies each of the 3-cent Iowa Statehood Commemorative and the 3-cent Smithsonian Institution commemorative postage stamps issued by the Post Office Department (173990); 3 copies each of the United States 5-cent airmail postage stamp and the 3-cent Stephen Watts Kearny commemorative postage stamp (174748); 3 copies each of the 3-cent Thomas A. Edison stamp, and 5-cent United States airmail stamp, series 1947 (175876); die-proof of the Smithsonian Centennial 3-cent stamp for special exhibition during the celebration of the 100th Anniversary of the founding of the Smithsonian Institution (174260, loan).

POTZGER, Prof. J. E. (See under Butler University.)

POUGH, Dr. FREDERICK H., New York, N. Y.: A sample of brazilianite (type material) from Minas Gerais, Brazil (175098); 1 cut gem of brazilianite from Arrasuahy, Brazil (176065, exchange).

POWERS, Dr. HAROLD A., Moscow, Idaho: 9 samples of diatomaceous earth from Idaho (176367).

PRATT, Prof. IVAN, Corvallis, Oreg.: 6 fresh-water mollusks from Oregon (175989).

PREEBLE, E. A., Washington, D. C.: 3 cladocerans, 1 copepod, 2 amphipods, 1 mollusk, and a small collection of insects (174197).

PREEBLE, Mrs. WARREN G., St. Bernard, La.: 1 parasitic isopod (173373).

PRICE, HOMER F., Payne, Idaho: 16 dragonflies (174175).

PRICE, JOHN W., Lancaster, Pa.: 6 amphipods, and 3 flatworms from the Pequea silver mines near Lancaster, Pa. (176361).

PRINGLE, HENRY N., Takoma Park, Md.: A selected series of about 3,000 clay concretions from the Champlain clays of Rygate, Vt., showing growth and variations (174039).

PROJECTION SALES Co., Chicago, Ill.: (Through B. Pearlman) 1 triple-purpose filmatic slide and film strip projector (175106, loan).

PROSEN, ALBERTO F., Buenos Aires, Argentina: 140 beetles, representing 50 named species from Argentina (174198).

PUERTO RICO, UNIVERSITY OF, Rio Piedras, Puerto Rico: 3 mollusks from Puerto Rico (170321).

PUERTO RICO, UNIVERSITY OF, *Institute of Tropical Agriculture*, Mayagüez, Puerto Rico: 1 plant from Puerto Rico (173892).

PULLE, Dr. AUGUST, Utrecht, Netherlands: 120 grasses from Surinam (173627).

PULTZ, Dr. L. M. (See under University of Arizona.)

PYTLAK, LEONARD, New York, N. Y.: (Through National Serigraph Society) 40 serigraphs by Leonard Pytlak, for special exhibition October 27 through November 24, 1946 (174460, loan).

QUESTEL, ADRIEN, Pointe-a-Pitre, Guadeloupe: 1,007 plants (170998, 173630, 176300, 176301); 8 fishes, mollusks, echinoderms, 43 miscellaneous insects from Guadeloupe, and marine invertebrates (174342); 56 crustaceans and worms, 206 mollusks, 5 gorgonians, 1 parasitic worm, 1 echinoderm and a small collection of insects (175262).

QUISENBERRY, BENSON L., Fort Collins, Colo.: (Through Dr. M. T. James) 1 fly, paratype of a new species (176342).

QUIVIRA SPECIALTIES Co., Topeka, Kans.: (Through Dr. Charles E. Burt) 12 periwinkles (*Littorina irrugata*) from near Brunswick, Ga. (173641).

RADFORD, C. D., Manchester, England: 36 mites (175204, exchange).

RAINEY, Mrs. PENELOPE, Vienna, Va.: 16 hummingbirds from Ecuador (174597).

RAMBO, B., S. J. (See under Herbarium Anchieti, Porto Alegre, Brazil.)

RAMIE MILLS OF FLORIDA, INC., Zellwood, Fla.: 5 pounds degummed, unbleached ramie fiber (175985).

RAMOS, J. A. (See under College of Agriculture.)

RAPP, WILLIAM F., Urbana, Ill.: 201 land and fresh-water mollusks from Illinois, Indiana, Michigan, and Tennessee, together with 1 terrestrial isopod and 1 beetle (171609); 7 amphipods (174621); 19 plants from Illinois (173704); 36 reptiles and amphibians mostly from New Jersey (174950).

RASETTI, Dr. FRANCO, Quebec, Quebec: 375 fossil brachiopods and ostracods from Cambrian and Ordovician boulders of the Levis formation, Quebec (175143).

RATCLIFFE, J. H., Woodhaven, N. Y.: 1 folding Hawkeye camera, No. 4, Model No. 2 (176042).

RAUSCH, ROBERT, Madison, Wis.: 5 mollusks from Ohio (172869); 1 slide of the type of a new species of cestode (173548).

RAWSON, Dr. D. S. (See University of Saskatchewan.)

REECE, Hon. CARROLL, Washington, D. C.: 60 glass negatives of Washington, D. C., and vicinity (174939).

REED, CLYDE T., Tampa, Fla.: 56 worms and 2 shrimps (174868).

REED, FRED C., Washington, D. C.: 2 plants cultivated in Washington, D. C. (174432).

REEDER, JOHN R. and CHARLOTTE G., Washington, D. C.: 46 plants from New England (174314).

REEDER, Mrs. JOHN, Cambridge, Mass.: 98 grasses from western United States (173287).

REESIDE, Dr. J. B., Jr. (See under Department of the Interior, Geological Survey.)

REHDER, Dr. HARALD A., Washington, D. C.: 1,800 land, fresh-water, and marine shells, together with fossils, insects, and Crustacea from the coastal areas of Virginia, North Carolina, and South Carolina (174700); 12 lots, 35 samples, of land and marine shells from North and South Carolina; also 3 samples of barnacles from Myrtle Beach, S. C. (176204).

REID, DOUGLAS M., Harrow, Middlesex, England: 5 amphipods (173806, exchange); 15 amphipods (176337).

REINHARD, Dr. E. G. (See under Catholic University of America.)

RETZ, Dr. P. RAULINO. (See under Herbario "Barbosa Rodrigues.")

REKO, Dr. B. P., Tacubaya, D. F., Mexico: Sample of grass from Mexico (175410, exchange).

RESNER, ERNEST, Washington, D. C.: 232 mollusks from Subic Bay, Philippine Islands (172538).

REVERE CAMERA CO., Chicago, Ill.: 1 Revere Model 88 8-mm. motion-picture camera; 1 Revere 8-mm. motion-picture projector (174696).

RICE, Mrs. A. MURRAY, Houston, Tex.: 189 marine mollusks from Majuro Atoll, Marshall Islands (175688).

RICK, Mrs. G. H., Norfolk, Va.: (Through Mrs. Frank L. Eckert) 1 egg case of mollusk from Virginia Beach, Va. (176345).

RICKER, P. L., Washington, D. C.: 36 plants from the western United States (174146); plant from Oregon (174577).

RICKETTS, E. F., Pacific Grove, Calif.: 39 vials of Crustacea (172360); approximately 215 marine invertebrates (173639); 149 samples of marine fishes from British Columbia collected in May and June 1946 (174051); 26 lots of Bryozoa (174192); 5 mollusks and 1 crab from Clayoquot Sound, Vancouver Island, British Columbia (174849).

RIFFLARD, DÉSIRÉ C., Brussels, Belgium: 5 fossils from near Brussels (176336).

RIJKSMUSEUM VAN NATUURLIJKE HISTORIE, Leiden, Holland: (Through Dr. G. C. A. Junge) 1 pheasant from Sumatra (175590); 1 bird (175741), exchange).

RILEY, N. ALLEN, Chicago, Ill.: 200 samples of Eocene Mollusca from the Lutetian of Damery, France (174760).

RINEY, THANE, Hayward, Calif.: (Through John Mirhij) 35 reptiles and amphibians and 1 mammal from Syria (166365).

RITCHER, Dr. PAUL O. (See under Agricultural Experiment Station, Lexington, Ky.)

RIVAS, LUIS RENÉ, Cambridge, Mass.: 415 fishes and 1 crustacean from Cuba (174500); 57 fresh-water fishes, including holotype and paratypes of a new species, collected by the donor (173711).

ROADS, KATIE M., Hillsboro, Ohio: Plant from Ohio (173531).

ROBBINS, G. THOMAS. (See under University of Arizona.)

ROBERTS, Dr. H. R., Philadelphia, Pa.: 5 samples of mosquito material (175865).

ROBINSON, C. H., Sr., Puyallup, Wash.: (Through Dr. Frank L. Hess) Fossil fern from Castledale, Utah (175299).

ROBINSON, Mrs. MYRTLE D., Pomona, Calif.: Gold medal in wooden casket awarded to George F. Robinson by the Congress of the United States in appreciation of his services in saving the life of Secretary of State William H. Seward when he was attacked at the time of the assassination of President Abraham Lincoln (175399).

ROBYNS, Dr. W. (See under Jardin Botanique de l'État.)

ROCA-GARCÍA, Mrs. HELEN SCHIEFER DE, Bogotá, Colombia: Plant from Colombia (173628).

ROCHESTER, UNIVERSITY OF, Biological Laboratories, Rochester, N. Y.: (Through Prof. Robert E. Bugbee) 29 insects, including 5 paratypes (173603, exchange).

ROCKEFELLER FUNDACÃO, Rio de Janeiro, Brazil: 12 mosquitoes, including types of 4 species (173697).

ROEBLING FUND, Smithsonian Institution: The Walters, Cotton County, Okla. meteorite, weighing 62 pounds 4 ounces (174347); 2 mineral samples, viz, allactite and friedelite, both from Sterling Hill, N. J. (174758).

ROGER, Dr. JEAN. (See under Muséum National d'Histoire Naturelle.)

ROGERS, T. H. (See under Alabama Polytechnic Institute.)

ROGICK, Dr. MARY DORA, New Rochelle, N. Y.: 5 bryozoans (173293).

ROLLINS, Dr. REED, Stanford University, Calif.: 13 plants (174206).

RORKE, MARGARET HAYDEN, New York, N. Y.: (See under Textile Color Card Association of the United States, Inc.)

ROSAL, Col. ALFONSO CORONA DEL, Mexico, D. F.: Mexican silver 1-peso piece struck in 1944 (175818).

ROSENBERG, Dr. LAUREN E. (See under College of Agriculture, University of California.)

ROSENGURTT, Dr. BERNARDO, Estación Juan Jackson, Uruguay: 17 plants from Uruguay (173765, exchange); 51 plants from Uruguay (175750).

Ross, Dr. EDWARD S.; San Francisco, Calif.: 2 beetles (174423).

Ross, Dr. H. H. (See under Illinois State Natural History Survey.)

ROYAL BOTANIC GARDEN, Sibpur, India: 78 plants (176178, exchange).

ROYO Y GÓMEZ, Prof. José, Bogotá, Colombia. (See under Ministerio de Minas y Petróleos.)

ROZEROMM, Dr. LLOYD E. (See under Johns Hopkins University.)

RUNDLETT, EDMUND A., Staten Island, N. Y.: A small collection of insects from New York State (174030).

RUSSELL, DE KALB, Jr., Charlottesville, Va.: 455 plants from the South Pacific area and 60 butterflies from New Guinea and Queensland (174079).

RUTLEDGE, ARCHIBALD, Spartanburg, S. C.: A naval ornament of the 19th century (174228).

SAALFRANK, WILLIAM (deceased), Washington, D. C.: About 50 Mississippian invertebrate fossils (174416).

SAALFRANK, WILLIAM, and ELLIS YOKELSON, Washington, D. C.: 16 invertebrate fossils from the Frederick limestone at Ceresville, Md. (174036).

SAHLIN, CARL F., Miami, Fla.: "Mola" or woman's shirt, collected by donor from the Tule Indians of the San Blas coast of southeastern Panama (176215).

SAILER, DR. REECE I., Washington, D. C.: Stone celt, hammer, chert blades, etc., found on the Caroline Coghill farm, between Swan Creek and Sand Creek, Warren County, Ill. (175201).

SALTER, W. E., and P. S. BIXLER, Washington, D. C.: Toe bone of horse and large coprolite from Scientists Cliffs, Calvert County, Md. (174689).

SAM HOUSTON STATE TEACHERS COLLEGE, Huntsville, Tex.: (Through Dr. S. R. Warner) 1 plant from Texas (174664).

SAMUEL, Rev. JOHN (address unknown): 41 Middle Devonian crinoids from Alpena, Mich. (174592).

SÁNCHEZ S., Dr. José, Mexico, D. F.: 11 plants from Mexico (173893).

SANTA CLARA, UNIVERSITY of, Santa Clara, Calif.: The remaining parts, incomplete, of the gliders produced by John J. Montgomery, Santa Clara, Calif., in 1905 and 1911 (176385).

SARGENT, F. H., Falls Church, Va.: 182 plants mostly from North Carolina (174201); 9 plants from southeastern United States (174431).

SARGENT, HARRY B., Durant, Miss.: 1 cultivated plant (173492).

SASKATCHEWAN, UNIVERSITY of, Saskatoon, Saskatchewan: (Through Dr. D. S. Rawson) 100 amphipods, 70 mysids, 4 copepods (173001).

SAUNDERS, DR. GEORGE B. (See under Department of the Interior, Fish and Wildlife Service.)

SAWAYA, DR. PAULO, São Paulo, Brazil: 25 frogs from São Paulo and Paraná, Brazil (174872).

SAXTON, V. F., Sarasota, Fla.: 1 mollusk (172876); 1 mollusk from South Australia (174604).

SCAVARDA, Petty Officer LEVY, Washington, D. C.: 5 unused Brazilian postage stamps issued in 1945 commemorating the Brazilian Expeditionary Force and the United States Fifth Army battle in Italy (174170).

SCHEDL, DR. KARL E., Lienz, Austria: 14 beetles, including 9 paratypes (174135, exchange).

SCHIFFER, DR. VICTOR B., Seattle, Wash.: (See under George P. Smith.)

SCHMIDT & CO., WILLIAM V., INC., New York, N. Y.: (Through H. M. Paskow) 1 turquoise from Nishapoor, Iran (174-815); 1 lot of small peridot roughs from the Red Sea (175992).

SCHNEIDER, GEORGE, South Orange, N. J.: Model of an English merchant ship of about 1620, made by the donor, and representing as nearly as possible the appearance of the Pilgrims' *Mayflower* (173635).

SCHULDT, CHARLES A., Tampa, Fla.: 1 radio head-set with 2 ear phones made by Lambert Schmidt, Weehawken, N. J., used by donor from about 1910 (174918).

SCHULTZ, DR. LEONARD P. (See under Smithsonian Institution, National Museum, collected by members of the staff.)

SCOGGIN, CHARLES R. (deceased): Archaeological materials from the Valley-End site about 1 mile west of the Lindenmeier site, Larimer County, Colo. mostly surface material with a few excavated pieces (176235).

SCOTT, HUGH B., Washington, D. C.: 1 Premier camera (175202).

SEGERSTROM, CHARLES H. (deceased): (Through Charles H. Segerstrom, Jr.) A sample of leaf gold from Eureka mine, Priests Grade, Tuolumne County, Calif. (174414, exchange).

SEIBERT, R. J., St. Louis, Mo.: 4 grasses from Peru and Colombia (174496). (See also under U. S. Department of Agriculture, Bureau of Plant Industry, Soils, and Agricultural Engineering.)

SHAFFER, MRS. MARGUERITE N., Washington, D. C.: Plant from the District of Columbia (174436).

SHANNON, RAYMOND C.: 18,130 miscellaneous insects, mostly Diptera (160975, bequest).

SHARP & DOHME, INC., Philadelphia, Pa.: 11 colored illustrations on medical subjects by Leslie Saalburg, in commemoration of the 100th anniversary of Sharp & Dohme, Inc., 1845-1945 (174704).

SHEARMAN, THOMAS G. (deceased): (Through Mrs. Thomas G. Shearman) 1 watercolor painting on cobweb by Johann Burgmann of Innsbruck, Tyrol, 1810, "Portrait of a Boy" (174855).

SHEEAN, OLIVER C., Portland, Maine: 1 bookplate "Ex Libris—Oliver Clement Sheean" (176176, exchange).

SHELFORD, DR. V. E., Champaign, Ill.: 11 samples of amphipods and 2 samples of Cladocera (172236).

SHEPARD, CHARLES D., Washington, D. C.: 1 Solex micrometer, Serial No. 1561, with 1 plug and 2 ring gauges (174972).

SHEPARD, Mrs. ALEXANDER, Shepherdstown, W. Va.: (Through Mrs. Harold A. Short) Sash and plaque owned by Philip Hickey Morgan in 1877, when serving as one of the justices of the judicial system of Egypt, and 2 documents connected with his appointment to this position (174417).

SHEPHERD, Mrs. J. W. (See under Mrs. T. E. Berger.)

SHIDELEER, Dr. W. H., Oxford, Ohio: 473 samples of Ordovician, Silurian, and Devonian Bryozoa (173902); approximately 600 samples of brachiopods, bryozoans, and stromatoporoids from the Upper Ordovician of Indiana, Ohio, Kentucky, and Tennessee (175438, exchange).

SHIPPEE, J. M., Lincoln, Nebr.: 4 skulls, 5 humeri and 1 femur fragment of Indians from Babcock Mound B, Platte County, Mo. (147276).

SHORT, Mrs. HAROLD A. (See under Mrs. Alexander Shepherd.)

SHULL, J. MARION, Chevy Chase, Md.: 1 plant from Maryland (173664).

SIKORSKY AIRCRAFT DIVISION, *United Aircraft Corp.*, Bridgeport, Conn.: A naval aviators' flight cap of the type supplied as complimentary issue to pilots of the Vought-Corsair airplane, World War II (176386).

SILVERWOOD, Mrs. GEORGIA A., Kodiak, Alaska: 7 lichens from Alaska (176155).

SIMON, JAMES R., Cheyenne, Wyo.: 44 fishes from the Caroline, Marshalls, and Ryukyu Islands (173954).

SINCLAIR, ALAN. (See under Sir Wal-rond Sinclair.)

SINCLAIR, G. WINSTON, London, Ontario: 10 brachiopods from Ordovician sediments of Ontario (174038).

SINCLAIR, Sir WALROND, and ALAN SINCLAIR, London, England: (Through B. F. Goodrich Co.) Original Hancock masticator, about 1840 (175766).

SIROIS, A. P., Chicago, Ill.: 1 Skan exposure meter and G-M #51-10 case (174575).

SJÖBERG, Dr. O., Los, Sweden: (Through Dr. Folke Linder) 4 beetles (174154).

SLATER, JAMES A., Urbana, Ill.: 159 bugs (174421).

SLATTERY, RICHARD G., Washington, D. C.: 223 archeological objects from a prehistoric Indian village site 30 miles northwest of Washington, D. C., on W. A. Walker farm, Selden Island, Montgomery County, Md. (175448); archeological materials, chiefly post-herds, from various sites in Page and Shenandoah Counties, Va., and Dare County, N. C. (176234).

SMITH, DR. ALLYN G., Berkeley, Calif.: 5 mollusks (173248); 34 mollusks from California (174344, 174733, 175430).

SMITH, CARROLL DUNHAM. (See under Carroll Dunham Smith Pharmacal Co.)

SMITH, FOSTER D., Caracas, Venezuela: 134 bird skins, 1 mammal (167609).

SMITH, GEORGE P., Seaside, Oreg.: (Through Dr. Victor B. Scheffer) Skull of a porpoise from near Seaside, Oreg. (174676).

SMITH, DR. HOBART M., Champaign, Ill.: 1 salamander, paratype (174067).

SMITH, JOHN W., Philadelphia, Pa.: Model of a rolling mill, examples of rolled and finished propeller blades in duralumin and a representative collection of blueprints, drawings, photographs, and texts relative to the above and also to his jet engine, radial engines, and aircraft constructed by him; also a photograph of Mr. Smith (176392).

SMITH, DR. LYMAN B. (See under Harvard University, Gray Herbarium.)

SMITH, MAXWELL, Winter Park, Fla.: 6 mollusks from Panama (172868, 175145).

SMITH, PHILIP W., Charleston, Ill.: 2 frogs from limestone caves near Waynesville, Mo. (174306).

SMITH, STANLEY JAY, Ithaca, N. Y.: 59 grasses (174721).

SMITHSONIAN INSTITUTION, Washington, D. C.: 26 birds and 2 mammals from Colombia (173488, deposit); 1 etching "Americana" by Ralph Fabri, Associate Member Print for 1947 of the Society of American Etchers (175428, deposit); 5 etched copper plates, by Charles W. Dahlgreen (175496, deposit); (through F. W. Bright) an old copper line cut of the original Smithsonian Institution seal, showing a left-facing profile of James Smithson (175903, deposit); Chinese scroll presented to Brig. Gen. James H. Doolittle, U. S. Army, in commemoration of the American air raid on Tokyo in 1942 (176143, deposit).

Bureau of American Ethnology: (Through M. W. Stirling) 65 ethnological objects (176068); 3 ethnological specimens (176517); ceremonial cane, from the Iroquois of Six Nations Reserve, Canada, collected by J. N. B. Hewitt in June 1916 (176347).

National Museum, collected by members of the staff: 2,560 miscellaneous insects and spiders and 4 frogs, collected in South America by Dr. E. A. Chapin (173665); approximately

500 vertebrate fossils from the Paleocene and Cretaceous of Utah and Eocene of Wyoming collected by Dr. C. Lewis Gazin (174444); 23 small mammals collected in Brazil by Dr. Remington Kellogg in 1943 (167618); 13 small mammals from Fairfax County, Va., collected by Dr. Remington Kellogg and W. M. Perrygo (173811); 6 cetacean samples, including skull, from mouth of Parkers Creek, Calvert County, Md., collected by Dr. Remington Kellogg (174455); 250 Ordovician brachiopods and other fossils from the Oranda and Martinsburg formations near Harrisonburg, Va., collected by Dr. Alfred R. Loeblich, Jr., and Dr. G. Arthur Cooper (174682); approximately 2,000 invertebrate fossils from the Ordovician, Devonian, and Pennsylvanian of Oklahoma collected by Dr. Alfred R. Loeblich, Jr. (173903); 28,594 fishes, together with mollusks, crustaceans, reptiles, amphibians, and insects, collected by Dr. Robert R. Miller and assistants in Guatemala in spring of 1946 (172210); 4,800 plants from St. Vincent, B. W. I., collected by C. V. Morton under funds provided by Ernest N. May (175364); 38,709 fishes, together with collections of reptiles, crustaceans, echinoderms, mollusks, corals, worms, annelids, coelenterates, and algae taken during Operation Crossroads of the Navy Department in the Marshall Islands in 1946, collected by Dr. Leonard P. Schultz and Dr. Earl S. Herald (172586); large collection of birds, mammals, reptiles, fishes, marine invertebrates, insects, and spiders, parasitic worms, mollusks, and echinoderms, collected in the Marshall Islands while a member of the Navy Department's Operation Crossroads, at Bikini during February-August 1946, collected by Dr. J. P. E. Morrison (172224); 24 small mammals from Shenandoah National Park collected by Dr. A. Wetmore (173813).

National Museum, obtained by purchase: 6 bird skins and 5 sets of birds' eggs, all from Manchuria (173803); 23 sets of eggs with 13 nests and 26 skins of birds, from Manchuria (173910); 6 bird skins from Cameroon (173911); 1,400 photographs of type samples of plants in European herbaria (174149); 156 plants from the Venezuela-Brazil boundary collected by Capt. Félix Cardona Puig

(174666); 320 European beetles (mostly cotypes) (174938); 28 photographic negatives and 27 prints of porpoises (175325); 4 bird skins and a collection of 118 insects (175421); an embroidered patch-work cashmere shawl 75 inches square (175432); 609 wasps, representing 105 named species, from Peru (176028); 1,000 photographic prints of types in European herbaria (176264).

National Zoological Park: 20 bird skeletons, 1 skin, and 1 egg (173700); 17 birds (175321, 176063); 21 mammals received between July 1, 1946, and June 12, 1947, not otherwise accessioned (176388).

SNODDY, MRS. CARRIE T., Falls Church, Va.: (Through T. B. Snoddy, Jr.) 1 long-focus Montauk camera and 13 plate holders; 1 Pony Premo camera and 1 plate holder manufactured by Rochester Optical Co. (175355); 9 pieces of miscellaneous photographic apparatus and 143 lantern slides (175748).

SNYDER, DR. THOMAS E., Beltsville, Md.: 480 miscellaneous insects and 1 salamander collected on Barro Colorado Island, Panama, in February 1947 by Dr. Snyder (175589).

SNYDER & SON, M. L., Philadelphia, Pa.: (Through Herbert A. Greene) 1 "Lowell's Family Washer," a combination washer-ringer patented June 3, 1873 (173597).

SOHON, DR. ELIZABETH, Chevy Chase, Md.: 25 original drawings by Gustavus Sohon, made among the Indians of the Northwest Plateau, 1854-60 (176371).

SOMEREN, DR. V. G. L. VAN, Ngong, East Africa: 2 butterflies (173781, exchange).

SORENSEN, A., Pacific Grove, Calif.: 2 parasitic copepods (173615); 50 sessile barnacles (173807); 11 marine mollusks from Guaymas, Mexico (174020); 26 mollusks from Bahia, Puerto San Carlos, Sonora, Mexico (175132); 61 mollusks from Sonora, Mexico (175610).

SOUKUP, DR. J., Lima, Peru: 78 plants from Peru (173703, 174912).

SOUTHERN RHODESIA NATIONAL MUSEUM, Bulawayo, South Africa: (Through Dr. George Arnold) 52 samples representing 39 species of Hymenoptera, of which 40 percent are new to the Museum collection (176032, exchange).

SOUTHWORTH, CHARLES, Thedford, Ontario: 6 fossils from the Devonian of southwestern Ontario (175492).

SPERRY, JOHN L., Riverside, Calif.: 3 insects (175493).

SPRINGER, STEWART, Stuart, Fla.: 1 snake eel, 1 immature female Knopp's shark, 1 embryo male shark (175994).

SPRINGER FUND, Smithsonian Institution: 2 blastoids and 4 crinoids from the Devonian of Ontario (174168) : 11 crinoids of 3 genera (175304).

SPRUANCE, BENTON, Philadelphia, Pa.: 36 lithographs (176043, loan).

STANFORD UNIVERSITY, Stanford University, Calif.: 18 plants from Ecuador (174309) ; 8 plants from Ecuador, collected by Dr. Ira S. Wiggins (174910, exchange).

STANTON, GILMAN S., New York, N. Y.: 8 cut garnets from Manhattan, N. Y. (175096).

STANTON, Dr. T. W., Silver Spring, Md.: 2 cultivated plants (173648) ; 2 cultivated plants from Maryland (173707).

STARK, ROBERT J., Grapevine, Tex.: 2 fossils from the Pennsylvanian of Kyle Mountain, Palo Pinto County, Tex. (173478) ; fossil plant from the Cretaceous of Texas (173784) ; 4 Cretaceous invertebrate fossils from Texas (175285).

STATE, U. S. DEPARTMENT OF. (See under Helen Barlow.)

STAZIONE DI ENTOMOLOGIA AGRARIA, Florence, Italy: 78 ants representing 17 species (175737, exchange).

STEARNS, RICHARD E., Baltimore, Md.: Archeological and skeletal materials from the Hughes site, about 6 miles south of Poolesville, Montgomery County, Md.; small sample collections from various other sites in Maryland (176236).

STEERE, Dr. WILLIAM C., Ann Arbor, Mich.: 14 plants from Colombia (176-302).

STEHLE, H., Tivoli, Martinique: 8 frogs, 1 lizard, 2 earthworms, and insects (173942) ; 1,158 plants from the Lesser Antilles (174443).

STEINITZ, Dr. H. (See under Hebrew University.)

STEPHENSEN, DR. K. (See under Universitets Zoologiske Museum.)

STEPHENSON, MORTON B., Houston, Tex.: 82 Eocene (Weches) ostracods from Smithville, Bastrop County, Tex. (174800).

STEVENSON, DR. F. V., Bogotá, Colombia: Approximately 4,000 Upper Devonian invertebrate fossils from New Mexico (175744).

STEVENSON, JOHN A., Beltsville, Md.: 40 mosses from Western States (174821).

STEYERMARK, DR. JULIAN A. (See under Chicago Natural History Museum.)

STEYSKAL, GEORGE, Detroit, Mich.: 2 flies (175311) ; holotype of fly from Mexico (175782).

STIRLING, DR. MATTHEW W., Washington, D. C.: 41 land shells from Veracruz, Mexico (175445) ; 2,500 freshwater shells from Veracruz (175934). (See also under Smithsonian Institution, Bureau of American Ethnology.)

STOCKTON, A. C., Stockton, Calif.: (Through Edgar T. Zook) a sample of crystalline gold from the American River, Placer County, Calif. (174027).

STOVER, CONNIE, Parkers Landing, Pa.: (Through Oliver C. Hinckle) 1 pilot-blacksnake egg containing embryo, from Parkers Landing, Pa. (174875).

STOWELL, H. T., Westmoreland Hills, Md.: Amphibian tracks from east bank of Greenbrier River, Pocahontas County, W. Va., just south of Island Lick Run, probably Pocono series of Mississippian (Lower Carboniferous), July 1939 (176356).

STOYANOW, DR. ALEXANDER, Tucson, Ariz.: 21 Jurassic pelecypods from San Marcial, Sonora, Mexico (174453).

STRACZEK, JOHN A., Washington, D. C.: A fossil upper cheek tooth of a horse, found on Kenwood Beach, Md. (174716).

STRANDTMANN, DR. R. W., Galveston, Tex.: 3 slides of cotypes of mites (174695).

STRATTON, DR. ROBERT. (See under Oklahoma Agricultural and Mechanical College.)

STRICKLAND, PROF. E. H., Edmonton, Alberta: 2 beetles (174705).

STRINGHAM, PROF. BRONSON, Salt Lake City, Utah: 1 new mineral tinticite from the Tintic Mining District, Utah (type material) (174644).

STROHBEIN, JOHN P., Santa Cruz, Calif.: 3 mollusks (175875).

STUMM, DR. ERWIN, Oberlin, Ohio: 4 brachiopods from the Devonian Detroit River limestone of Ohio (174412).

SUL ROSS STATE TEACHERS COLLEGE, Alpine, Tex.: (Through Dr. L. C. Hinckley) 30 Texas plants (175179).

SUTCLIFFE, W. H., SR., Durham, N. C.: 12 amphipods (175288).

SWALLEN, JASON R. (See under U. S. Department of Agriculture.)

SWANSON, DR. LEONARD E., Gainesville, Fla.: 50 mollusks (174210).

SWEZEY, DR. O. H. (See under Hawaiian Sugar Planters' Association.)

SYDNEY, UNIVERSITY OF, Sydney, Australia. (Through Dr. Ida A. Brown) 380 Paleozoic and Tertiary fossil invertebrates from Australia (152877, exchange).

SYLVESTER, RUTH, Washington, D. C.: 1 photograph of Gen. Sam Houston by Matthew B. Brady (175449).

TAYLOR, Dr. WILLIAM RANDOLPH, Ann Arbor, Mich.: 43 grasses (174556); 13 plants from Bikini, collected during Operation Crossroads (175362); 243 plants from Marshall Islands (176072).

TEXAS, UNIVERSITY OF, Austin, Tex.: 194 plants (173428, 175968, exchange); 147 plants from Texas (173565, 173775, exchange).

Bureau of Economic Geology, Austin, Tex.: (Through Dr. Virgil E. Barnes) 10 type specimens of Upper Cambrian gastropods (173558); (through Dr. John T. Lonsdale) 2 paratypes of a brachiopod from the Pennsylvanian of Texas (176323).

TEXAS COLLEGE OF ARTS AND INDUSTRIES, Kingsville, Tex.: 154 plants from Texas (174316); (through Dr. Edwin R. Bogusch) 67 plants from Texas (174555).

TEXTILE COLOR CARD ASSOCIATION OF THE UNITED STATES, INC., New York, N. Y.: (Through Margaret Hayden Rorke) 2 spring season (1947) color cards of America, one of woolen swatches, one of rayon crepe (174920); 2 fall (1947) season color cards of America, one containing woolen swatches and the other a rayon crepe collection (176060).

THAL, SAM, Boston, Mass.: 32 drypoints by Sam Thal for special exhibition May 26 through June 22, 1947 (176177, loan).

THOMAS, Dr. W. B. S., Dover-Foxcroft, Maine: Sample of probable Upper Ordovician shale containing brachiopods from Southampton Island, in northern Hudson Bay (174085).

THOMPSON, Dr. B. G.: Corvallis, Oreg.: 15 mollusks from Portland, Oreg. (176409).

THOMPSON, Dr. JOHN W., Jr., Madison, Wis.: 10 plants (173546, exchange); 50 plants from Wisconsin (173763, 174474, exchange).

THORAL, Prof. MARSEL. (See under Université de Lyon.)

TILLOTSON, Mrs. WESLEY W., and Mrs. SPENCER C. DEVAN, Corona, N. Y.: 2 United States national flags, one made during the period 1861-1863, the other made during the period 1876-1890 (173587).

TIMBERLAKE, P. H., Riverside, Calif.: 10 insects of 2 species, including holotype and allotype of one and male allotype of the other (174420).

TINDALE, B., Yarra Junction, Australia: 7 samples of diatomaceous earth (175560).

TITTERINGTON, Dr. P. F., St. Louis, Mo.: Skeletal parts of 24 individuals from Indian mounds in Calhoun County, Ill. (175339).

TODD, W. E. CLYDE. (See under Carnegie Museum.)

TOHOKU IMPERIAL UNIVERSITY, Sendai, Japan: (Through Lloyd G. Henbest) 54 Permian fusulinids from Japan (175678, exchange).

TOLMAN, RUEL P., Washington, D. C.: 681 portraits of doctors of medicine and dentistry (175469). (See also under Mrs. Elizabeth W. Diamond and Mrs. Constance Claghorn.)

TOMLINSON, W. H., Springfield, Pa.: A collection of rutile from Hartford County, Md. (174738).

TRAPIDO, HAROLD, Panama, Panama: 1 capybara skull (175406). (See also under Gorgas Memorial Laboratory.)

TRAUB, HAMILTON P., Beltsville, Md.: 2 plants (174355).

TRAUB, Capt. ROBERT, Washington, D. C.: 14 slide-mounted fleas (174419).

TEAVASSOS, HAROLDO, Rio de Janeiro, Brazil: 10 fishes from Brazil (174233, exchange).

TREASURY DEPARTMENT, Bureau of the Mint, Philadelphia, Pa.: (Through Edwin H. Dressel) 30 United States bronze, nickel, and silver coins struck in 1946 (175521); Procurement Division: (See under War Department, Adjutant General.)

TRESSLER, Dr. WILLIS L., College Park, Md.: 12 lots of ostracods, 600 samples, including holotypes and paratypes of three species and holotype of a fourth (176053).

TREWAVAS, Dr. ETHELWYNNE. (See under British Museum.)

TROELSON, JOHN C., New Haven, Conn.: 35 pieces of limestone containing fossils from the Ordovician of western Maryland (175142).

TRYON, Dr. R. M., Jr. (See under University of Minnesota.)

TURNER, GEORGE H., Fort Saskatchewan, Alberta: 52 grasses from Canada (174948, 175226).

TURNER, W. F., Rockville, Md.: 1 Cooper's hawk (175390).

TURVER, Mrs. H. R., South Gate, Calif.: 51 mollusks from Mexico (173125).

ULKE, Dr. TITUS, Washington, D. C.: 5 lithographs by Henry Ulke—German political cartoons about 1846 (173-623); 2 plants from District of Columbia (173643, 173972); 2 plants from Maryland (173649, 173770); 7 mollusks from the District of Columbia (173709, 173958); 2 plants from Virginia (173886).

ULMANN, ALEXANDER E., New York, N. Y.: A painting in color by Peter Helek, for special exhibit March 3 through April 27, 1947 (175530, loan).

ULMER, DAVID H. B., Jr., Moorestown, N. J.: 1 crab (174072).

UNGER, H. J., Silver Spring, Md.: A fossil right lower cheek tooth of a horse, from Rock Creek at Maryland-District of Columbia line (174715).

UNION OF SOVIET SOCIALIST REPUBLICS, Academy of Sciences, Moscow, U. S. S. R.: (See under Academy of Sciences, U. S. S. R.)

UNITED AIRCRAFT CORP., *Sikorsky Aircraft Division*, Bridgeport, Conn: A naval aviators' flight cap of the type supplied as complimentary issue to pilots of the Vought-Corsair airplane, World War II (176386).

UNITED-CARR FASTENER CORP., Cambridge, Mass.: (Through Carl B. Chupp) Autogiro kite, *Rotoflyer* captive autogiro, Model H, an example of the type which is currently sold commercially as a scientific toy (174-702).

UNITED HELICOPTERS, INC., Palo Alto, Calif.: Model of "Hiller-copter" aircraft, coaxial helicopter devised by Stanley Hiller, Jr., model about $\frac{1}{16}$ size, designed, constructed, and flown in 1944 by Mr. Hiller of Berkeley, Calif. (172440).

UNIVERSAL CAMERA CORP.: New York, N. Y.: 1 Mercury II camera (still) with F2.7 lens (174763).

UNIVERSITÉ DE LYON, Lyon, France: (Through Prof. Marsel Thoral) 190 Jurassic brachiopods from Monsard (176174, exchange).

UNIVERSITETETS ZOOLOGISKE MUSEUM, Copenhagen, Denmark: (Through Dr. K. Stephensen) 11 amphipods (172-630); 43 amphipods (172732, exchange).

U. S. MARITIME COMMISSION, Washington, D. C.: 2 scale models of steamships, U. S. Maritime types, period of World War II (173712).

URIPE, DR. LORENZO URIPE, Bogotá, Colombia: 54 plants from Colombia (173830, 173883, 174602, 175731, 176071).

VAN EMDEN, DR. FRITZ, London, England: 16 samples of beetle material (171773).

VAN HYNING, DR. T., Sebring, Fla.: 118 marine shells from Florida (171637).

VAN LITH, P. D. A., Laren, Netherlands: 6 unused semipostal stamps issued by the Netherlands in 1946 (174304).

VATIKIOTIS, SOZON, Tarpon Springs, Fla.: 20 marine mollusks from off Tarpon Springs, Fla. (176076).

VICARINO, MRS. R., Arlington, Va.: Mauve satin waistcoat and knee breeches and dark blue and white silk waistcoat of the middle of the 18th century (174692).

VICTOR ADDING MACHINE CO., Chicago, Ill.: Norden Bombsight No. 4120, used when the Army Air Forces dropped the first atomic bomb on Hiroshima, Japan, August 6, 1945; two letters authenticating this bombsight (173408).

VIOLETT, MRS. EFFIE M., Washington, D. C.: 1 mollusk from Fairfax County, Va. (174441).

VIRGINIA GEOLOGICAL SURVEY, Charlottesville, Va.: (Through Dr. Arthur Bevan) Approximately 2,000 assorted invertebrate fossils from the Paleozoic deposits of the Appalachian Valley of Virginia collected by the late Dr. Charles Butts (175352).

VITALIANO, DR. CHARLES J., Gabbs, Nev.: 1 sample of brucite from Gabbs (174935).

VOGTMAN, DON, Trinidad, Colo.: A small collection of miscellaneous insects from the South Pacific regions (174878).

VOKES, DR. HAROLD E. (See under Johns Hopkins University.)

VOOUS, H. K., JR., Amsterdam, Holland: 32 birds from Holland (172436, exchange).

WALCOTT FUND, CHARLES D., Smithsonian Institution: Approximately 20,000 invertebrate fossils from Silurian, Devonian, and Ordovician of the Arbuckle Mountains, Okla., collected by Dr. A. R. Loeblich, Jr., April-May 1947 (176321); 350 Ordovician invertebrate fossils from Harrisonburg, Va.; 350 lower Devonian invertebrates from Hancock, Md., about 100 Middle Ordovician invertebrates and approximately 50 blocks of Ordovician limestone containing silicified trilobites from Strasburg, Va., collected by Drs. G. A. Cooper and A. R. Loeblich, Jr., April 1947, 300 fossil invertebrates, and 30 blocks from Silurian and Devonian, West Virginia and Maryland, May 30—total 1,100 fossils and 80 blocks (175928); 62 invertebrate fossils including 2 trilobites (174774); 25,000 Ordovician, Silurian, and Devonian invertebrates from Tennessee and Virginia (174688); approximately 10,000 invertebrate fossils from all periods of the Paleozoic of Arkansas, Oklahoma, west Texas, New Mexico, and Nevada, collected by Dr. G. Arthur Cooper (174084).

WALDEN, A. A., New Market, Va.: 9 mollusks, from New Market (173624).

WALKER, DR. E. H., Washington, D. C.: 40 plants from Virginia, Maryland, and District of Columbia (174732, 175921).

WALKER, LESTER W., Fairfax, Va.: 1 great blue heron (173794).

WALLACE, CHARLES R., Marathon, Fla.: 2 mollusks from Cape Sable, Fla. (175987).

WALLACE, HON. HENRY A., Washington, D. C.: 1 bow and 4 arrows from Outer Mongolian Peoples Republic (176156).

WAR DEPARTMENT, *Adjutant General*, Washington, D. C.: (Through Procurement Division, Treasury Department) 9 mounted gems, viz, 6 rubies, 1 star ruby, 1 blue sapphire, and 1 emerald (175298).

Army Air Forces, Washington, D. C.: Chinese scroll presented to Brig. Gen. James H. Doolittle, U. S. Army, in commemoration of the American air raid on Tokyo in 1942 (176144, loan).

Army Air Forces Proving Ground Command, Orlando, Fla.: 12 snakes and 1 lizard from Florida (173462).

Army Medical Center, Washington, D. C.: (Through Maj. George W. Hunter, 3d) 3 fresh-water crabs from the Philippines (174335).

Army Medical Department Schools, Fort Sam Houston, Tex.: (Through Lt. Herbert C. Barnett) 4 spiders collected by Lt. Barnett in Fort Sam Houston, December 9, 1946 (174781).

Chief Signal Officer, Army Pictorial Service Division, Washington, D. C.: (Through Paul J. Murdock) 20 photographs depicting the use of visual training in the United States Army (175799).

Commission on Schistosomiasis, Washington, D. C.: 200 mollusks from the Philippines (175337).

General Staff, Intelligence Division, Washington, D. C.: Anthropological materials from the former Institut für Deutsche Ostarbeit (176333, permanent loan).

Natural Resources Section: (Through Capt. Allis F. Hussey) 730 plants from Japan, together with 561 photomicrographic prints of Japanese wood sections (174911, 175857); (through Capt. Donald Haibach) 32 plants from Formosa (176240).

Nineteenth Medical General Laboratory: (Through Lt. Samuel A. Edgar) 108 adults and 42 slides Philippine mosquitoes (174850); (through J. W. Enke) 118 adults and 42 slides of Philippine mosquito (175317).

Seventh Army Medical Laboratory, Fort McPherson, Ga.: 140 mosquitos from Southeastern United States and 27 exotic species (175-023).

Surgeon General, Army Institute of Pathology, Washington, D. C.: 9 mites, type and cotypes (175312).

WARD, CHARLOTTE B., Urbana, Ill.: Collection of microscopes and accessories gathered by Richard Halsted Ward, M. D. (first president of American Microscopical Society), and Dr. Henry B. Ward, parasitologist, grandfather and father respectively of the donor (84 specimens) (174919).

WARD, Col. FRANK, Bradenton, Fla.: 5 canceled documents, 3 English translations, and a metal badge of the type used by the Executive Headquarters as prepared by the United States branch (12 specimens) (176357).

WARNER, DR. S. R., Huntsville, Tex.: (See under Sam Houston State Teachers College.)

WARREN, DR. P. S., Edmonton, Alberta, Canada: 6 Devonian fossils from the Northwest Territories, Canada (176-141).

WASHINGTON, UNIVERSITY OF, Seattle, Wash.: (Through Dr. C. L. Hitchcock) 25 plants (176070, exchange).

WASHINGTON POST, Washington, D. C.: 17 pictorial photographs, winners of the inter-high school competition, for special exhibition from May 23 to June 13, inclusive (176288, loan).

WASHINGTON STATE FISHERIES LABORATORY, Seattle, Wash.: (Through Charles K. Phenicie) 2 rockfish caught off Cape Beale (174151).

WATERHOUSE, G. S. (See under Princess Abigail W. Kawanananakoa.)

WEBER, DR. WILLIAM A. (See under University of Colorado.)

WEBSTER, PROF. DWIGHT A., Ithaca, N. Y.: 182 amphipods (175583).

WEBSTER, J. DAN, Houston, Tex.: 15 ants from Texas (175704).

WEDDERBURN, ALEXANDER J., Laurel, Md.: 1 captured German "Filmosto" lantern slide projector with accessories (174906).

WELLENIUS, DR. OTTO H., Ekenas, Finland: 280 ants (32 species) from Finland (174718, exchange).

WELLER, DR. J. MARVIN. (See under University of Chicago.)

WELLS, MRS. ANITA, San Diego, Calif.: A homespun linen sheet and matching pillowcase, hand-woven about 1825 (174747).

WELLS, DR. JOHN M. (See under Ohio State University.)

WELP, EDWIN, Kamrar, Iowa: 1 ambrotype (173981).

WESLEYAN UNIVERSITY, Middletown, Conn.: 1 cormorant (174426).

WESTERGAARD, DR. A. (See under *Naturhistoriska Riksmuseet*.)

WESTON, EDWARD, Carmel, Calif.: 61 pictorial photographs for special exhibition during March 1947 (175717, loan).

WESTON ELECTRICAL INSTRUMENT CORP., Newark, N. J.: (Through C. L. Ilg) 6 Weston electric-cell exposure meters and one Weston photographic thermometer (175105).

WEST VIRGINIA UNIVERSITY, Morgantown, W. Va.: 2 grasses (173632); 30 plants from the southeastern United States (173923); 3 grasses from Colombia (174625, exchange).

WETMORE, DR. A., Washington, D. C.: 1 set of 12 eggs of wild turkey (173487); 5 birds from Virginia (173882, 174034); sparrow from Virginia, also 3 other sparrows, 4 warblers, 1 flycatcher (174425); 9 birds from Virginia and Maryland (175447); photograph of Arthur H. Howell, biologist (175708). (See also under Smithsonian Institution, National Museum, collected by members of the staff.)

WHARTON, DR. G. W., Durham, N. C.: 2 beetles taken from a mole by Dr. Wharton in Durham County, N. C. (175933). (See also under Federal Security Agency, U. S. Public Health Service, Hamilton, Mont.)

WHEELER, DR. G. C. (See under University of North Dakota.)

WHITE, BURDETTE E., Merced, Calif.: (Through Mrs. D. H. Blake) 2 paratypes of a beetle (176149).

WHITE HOUSE, The, Washington, D. C.: Passenger elevator car used in the White House 1902-1946 (174446, transfer), 1 quetzal bird presented to President Truman by President Arevalo of Guatemala (176062).

WHITELEY, GEORGE, Jr., Pottstown, Pa.: 40+ amphipods (174617).

WHITLOCK, SARAH O., Washington, D. C.: Ancient Roman terra-cotta, Chinese, and Japanese brasses, a Mohave earthenware doll, a sewing kit, and a bundle of hospital lint of the Civil War period (174846).

WIENER, KURT, Washington, D. C.: 1 book, "The Language of Design," by C. Law Watkins (174854).

WILLARD, DR. BRADFORD, Bethlehem, Pa.: (See under Lehigh University.)

WILLEY, DR. GORDON, Washington, D. C.: 7 lots of archeological objects from ancient Chimú capital of Chanchan, near modern city of Trujillo, Province of Libertad, Peru (174845).

WILLIAM AND MARY, COLLEGE OF, Williamsburg, Va.: 45 plants from Virginia and Guam (174754, exchange); (through Dr. J. T. Baldwin) 11 plants from South America (174940, exchange).

WILLIAMS, MRS. CAROLINE COBEY, Washington, D. C.: 1 small drug mill and 2 household medicine chests, used at the beginning of the 19th century by the Cobey Family, Charles County, Md. (173646).

WILLIAMS, DR. F. X., Honolulu, T. H.: Sample of a new species of insect (174424); 9 Hymenoptera, 4 of which are paratypes (176365).

WILLIAMS, DR. LOUIS A. (See under Escuela Agricola Panamericana.)

WILLIAMS, DR. RALPH B., Juneau, Alaska: 4 mollusks, from Gold Creek (Juneau), southeastern Alaska (174672).

WILLIS, MRS. ANNIE C., Washington, D. C.: 11 beetles from Mahone Bay, Nova Scotia (173956).

WING, DR. M. W., Raleigh, N. C.: 22 vials of miscellaneous insects and spiders from North Carolina and Minnesota (173499).

WING, WALTER E., Coloma, Mich.: 310 mollusks from Pavuvu Island, Russell Group, Solomon Islands (169013).

WINN, JOHN W. (See under Chicago Natural History Museum.)

WIRTH, CAPT. WILLIS W., Honolulu, T. H.: 75 flies representing 7 species, 4 of them by 21 paratypes (174522). (See also under Federal Security Agency, U. S. Public Health Service, Honolulu, Hawaii.)

WISCONSIN, UNIVERSITY OF, Madison, Wis.: 34 plants (173424, exchange); 11 plants from Kwajalein (174147, exchange).

WISNIEWSKE, DR. ALFONSO. (See under Instituto Agronomico do Norte.)

WOFFORD, J. C., Augusta, Ga.: Fossil wood from West Virginia (175603).

WOLFE, COL. L. R., Washington, D. C.: 36 hawks from various parts of the world (174574); 3 mollusks from Oregon and Washington (174971).

WOOD, CARROLL E., JR., Cambridge, Mass.: 4 grasses from North Carolina and Virginia (174722).

WOODS, LOREN P. (See under Chicago Natural History Museum.)

WOOD, STEPHEN L., Logan, Utah: 12 beetles (174255).

WOODRING, DR. W. P., Washington, D. C.: A rare mollusk from Panama (176391). (See also under Alex Clark.)

WORTH, WILLIS W. (See Federal Security Agency, U. S. Public Health Service.)

WRAY, Dr. O. L. (See under North Carolina Department of Agriculture.)

WRIGHT, EDWARD PULTENEY, Grosse Pointe Farms, Mich.: 1 brachiopod from the Hamilton of Arkona, Ontario (174544).

WRIGHT, Mrs. EDWARD PULTENEY, Grosse Pointe Farms, Mich.: A slab of Collingwood limestone containing trilobites from Ontario (174569).

WRIGHT, Mrs. FREDERICK B., Falls Church, Va.: 1 myrtle warbler (175591).

WRIGHT, Dr. W. H., Washington, D. C.: 225 mollusks from the Philippines (172585). (See also under Federal Security Agency, U. S. Public Health Service.)

WYGODZINSKY, PETE, Rio de Janeiro, Brazil: 6 samples, 6 species, of identified bugs (170133); 12 bugs (173542); 180 insects (175738, exchange).

WYOMING, UNIVERSITY OF, Laramie, Wyo.: (Through Dr. C. L. Porter) 158 plants from Wyoming and Colorado (174823, exchange).

YALE UNIVERSITY, Peabody Museum, New Haven, Conn.: (Through Dr. Carl O. Dunbar) A Devonian crinoid from Michigan (174374, exchange).

YANG, Dr. Y., China: 235 invertebrate fossils from the Ordovician and Devonian of Ontario, Quebec, and New York (174409).

YATES, LLOYD D., Washington, D. C.: 1 bar amulet from Point Lookout, St. Marys County, Md. (175104).

YOKELSON, ELLIS. (See under William Saalfrank.)

YOUNMANS, Col. CHARLES LEROY, Habana, Cuba: 2 earthenware bowls excavated in 1944 by Colonel Youmans at the Taino Indian village site at La Caleta, Province of Trujillo, 25 km. east of Ciudad Trujillo, Dominican Republic (176329).

YOUNG, DR. FRANK N., Gainesville, Fla.: 2,000 miscellaneous insects, mollusks, intestinal worms, fish, and crustaceans collected in Caroline Islands and Oahu, T. H. (173696); approximately 2,500 miscellaneous insects, together with mollusks, crustaceans, and Foraminifera from Ulithi and Okinawa (174015); (through Austin H. Clark) 2 echinoids from Tertiary limestone on Okinawa (174457).

YUNCKER, Prof. T. G. (See under DePauw University.)

ZEIMET, CARLO, Vienna, Va.: Water-snake from Virginia (174300).

ZIESENHENNE, Lt. Comdr. F. C., San Francisco, Calif.: 104 crustaceans, some sea-urchins, starfish, and mollusks (173162); 20 brittle-stars from the Caroline Islands (173698); 35 butterflies (175978); 1 fish collected in Pacific Ocean by donor (176160).

ZIMMER, DR. JOHN T. (See under American Museum of Natural History.)

ZIMMERMAN, DR. ELWOOD C. (See under Hawaiian Sugar Planters' Association.)

ZIRKLE, ANNIE LEE, New Market, Va.: Mollusk from New Market (173625).

ZOOK, EDGAR T. (See under A. C. Stockton.)

ZOOLOGICAL INSTITUTE, Lund, Sweden: (Through Dr. Bertil Hanstrom and Erik Dahl) 1 fish (175683).

ZOOLOGICAL MUSEUM, Amsterdam, Netherlands: (Through Dr. L. F. deBeaufort) 3 fishes, including paratype of one (174468, exchange).

PUBLICATIONS ISSUED BY THE UNITED STATES NATIONAL MUSEUM DURING THE FISCAL YEAR 1946-47

REPORTS

Report on the progress and condition of the United States National Museum for the year ended June 30, 1946. 8vo, iii+113 pp. January 14, 1947.

BULLETINS

Bulletin 50, part 10. Birds of North and Middle America. Families Cracidae, Tetraonidae, Phasianidae, Numididae, Meleagrididae. By Robert Ridgway and Herbert Friedmann. 8vo, pp. i-xii, 1-484, figs. 1-28. December 18, 1946.

Bulletin 191. Life histories of North American jays, crows, and titmice. By Arthur Cleveland Bent. 8vo, pp. i-xi, 1-495, pls. 1-68. January 27, 1947.

Bulletin 192. The operculate land mollusks of the family Annulariidae of the island of Hispaniola and the Bahama Archipelago. By Paul Bartsch. 8vo, pp. 1-264, pls. 1-38. October 3, 1946.

PAPERS PUBLISHED IN SEPARATE FORM

FROM VOLUME 29, CONTRIBUTIONS FROM THE UNITED STATES NATIONAL HERBARIUM

Part 3. The American species of *Hymenophyllum*, section *Sphaerocionium*. By C. V. Morton. Pp. i-viii, 139-201. April 16, 1947.

FROM VOLUME 30, CONTRIBUTIONS FROM THE UNITED STATES NATIONAL HERBARIUM

Part 1. A botanical bibliography of the islands of the Pacific. By Elmer D. Merrill. Pp. 1-322. A subject index to Elmer D. Merrill's "A Botanical Bibliography of the Islands of the Pacific." By Egbert H. Walker, Pp. 323-404. February 25, 1947.

FROM VOLUME 95 OF THE PROCEEDINGS

Title-page, table of contents, list of illustrations, and index. Pp. i-viii, 615-647. March 24, 1947.

FROM VOLUME 96 OF THE PROCEEDINGS

No. 3200. Eight new species of chalcid-flies of the genus *Pseudaphycus* Clausen, with a key to the species. By A. B. Gahan. Pp. 311-327. November 22, 1946.

No. 3201. New cerambycid beetles belonging to the tribe Disteniini from Central and South America. By W. S. Fisher. Pp. 329-333. November 26, 1946.

No. 3202. *Machaeroides eother* Matthew, the sabertooth creodont of the Bridger Eocene. By C. Lewis Gazin. Pp. 335-347, pls. 45-46. December 16, 1946.

No. 3203. Review of some chalcidoid genera related to *Cerocephala* Westwood. By A. B. Gahan. Pp. 349-376, pls. 47, 48. December 31, 1946.

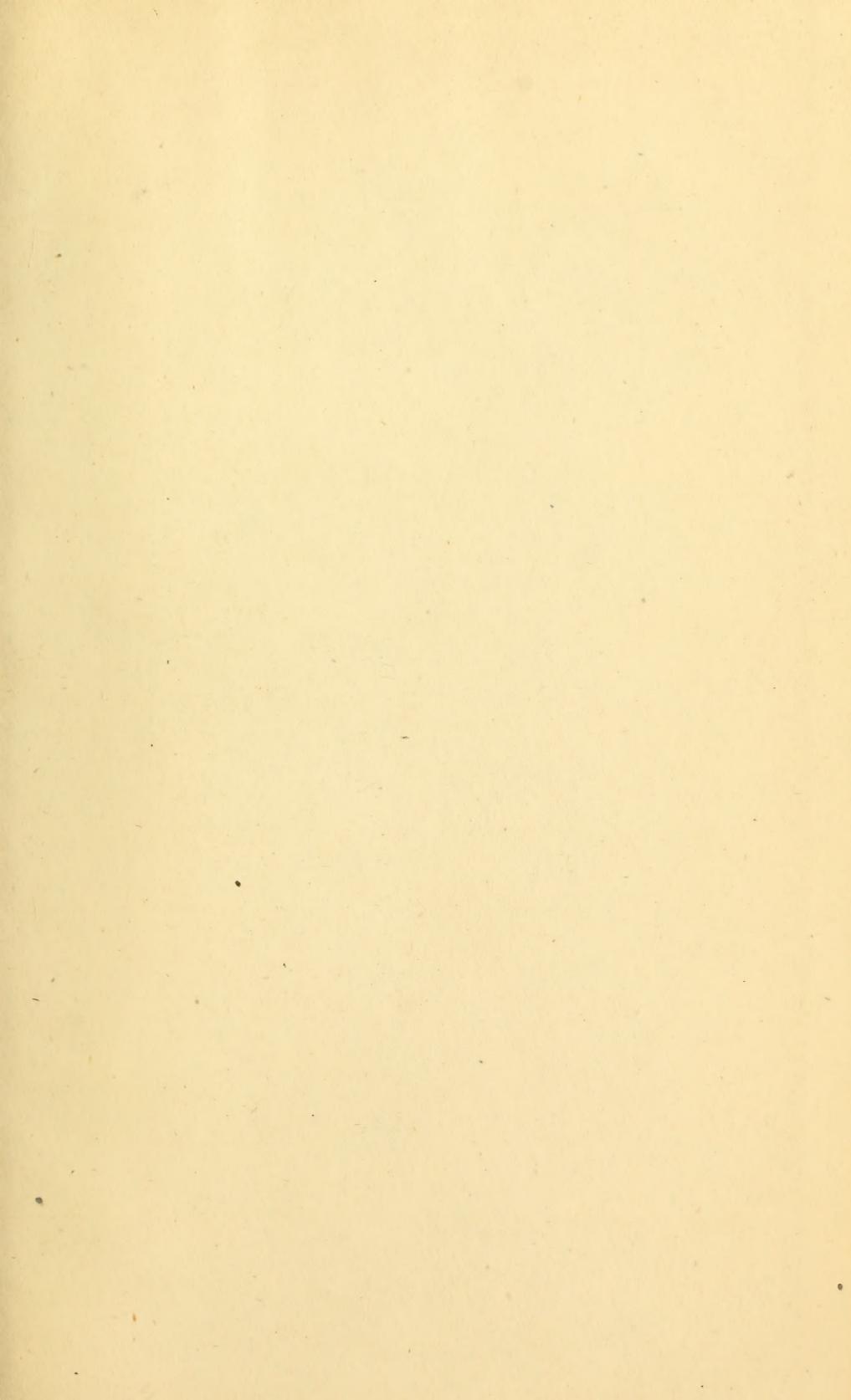
No. 3204. A revision of the genera of mullets, fishes of the family Mugilidae, with descriptions of three new genera. By Leonard P. Schultz. Pp. 377-395, figs. 28-32. December 5, 1946.

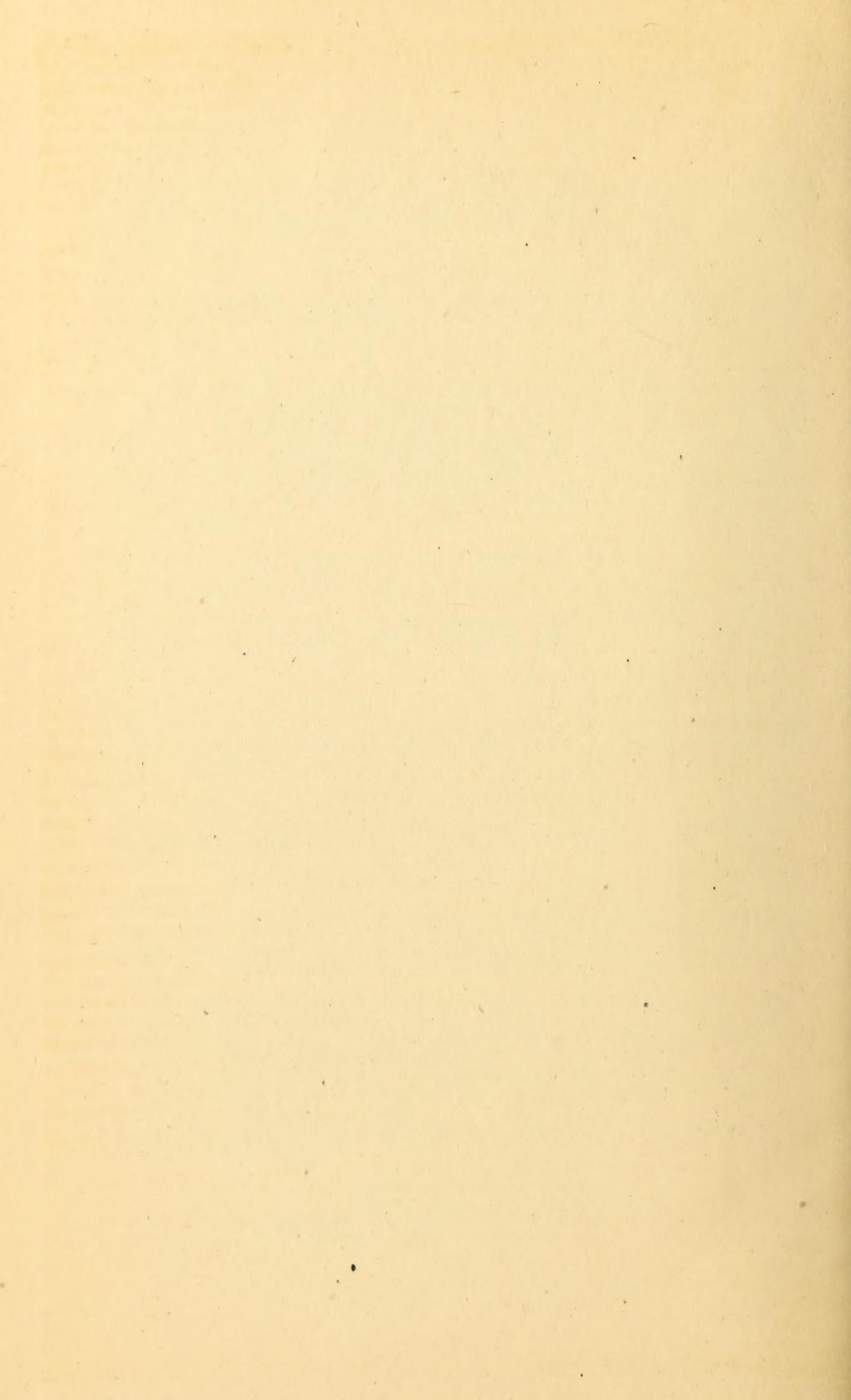
No. 3205. The phorid flies of Guam. By G. E. Bohart. Pp. 397-416, figs. 33-48. February 17, 1947.

FROM VOLUME 97 OF THE PROCEEDINGS

No. 3209. New cerambycid beetles belonging to the tribe Rhinotragini. By W. S. Fisher. Pp. 47-57. June 6, 1947.







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